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ABSTRACT

This memorandum presents and explains the position of the Commission of the European Communities on issues of higher education. In establishing the context for the memorandum it notes population and labor market changes. This memorandum identifies a series of actions which could be taken and raises a wide agenda of issues which argue for a stronger European dimension in planning and functioning than exists at present in higher education. It also identifies the Commission's role as a catalyst and facilitator of cooperative and common action in accordance with the principle of subsidiarity and respecting a diversity of provision. Critical areas discussed include participation in and access to higher education, partnership with economic life, continuing education, open and distance education, and the European Community dimension. The contours of the European dimension are defined and include student mobility, cooperation between institutions, Europe in the curriculum, the central importance of language, the training of teachers, recognition of qualifications and periods of study, the international role of higher education, information and policy analysis, and dialogue with the higher education sector. (JB)

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TASK FORCE
HUMAN RESOURCES
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Memorandum on Higher Education in the European Community

HE 025 704

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Memorandum on Higher Education in the European Community

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FOREWORD

In recent years almost 2000 higher education institutions throughout the Community have become involved in Community programmes in the areas of education, training and research. These programmes, such as COMETT, ERASMUS, LINGUA and the Framework Programme for Research and Development, have been a major stimulus for innovation and have promoted cooperation within and across national boundaries between higher education institutions and also cooperation with industry. They have involved exchanges, joint projects, mobility of staff and students and they have affected fundamentally the higher education institutions involved, in their teaching, research and public service functions. This multiplicity of transnational contacts has opened windows for many institutions on new approaches to teaching, learning and examining, new ways of doing things, new curricular possibilities, new research orientations and has contributed to increasing the diversity of higher education even within individual Member States.

Involvement in European programmes, whether on a participatory, an organisational, or an advisory basis, has reinforced a trend towards internationalisation which already existed in higher education institutions and has enlarged, both in scope and in scale, the opportunities for accentuating this trend as between the Member States of the Community. Perhaps the most important result of the Community programmes is that they have been instrumental in causing the higher education institutions to view their functions in a European as well as in a national and regional context. Higher education institutions have also maintained and fostered their links with countries outside the Community and have for this reason become important instruments in interpreting the Community to the wider world and vehicles for certain areas of Community interaction with third countries.

The growth of this European context in higher education and advanced training is assun .g a strategic importance to the European Community in the light of the completion of the Internal Market, the movements towards political union and the global challenges which must be met by the European economy. These developments depend, on the one hand, on the skills and knowledge which underpin economic competence and, on the other, on the understanding and commitment which support significant political transformations. They are expected to enhance the mobility of citizens, increasing the interaction between them and bringing about a cohesiveness which will in due course affect the lives of all Community citizens. The European Community and its Member States will have to respond to the challenges of science and technology and of global competition and do this increasingly within Community structures. The sphere of European Community influence and cooperation will be enlarged through additional memberships and agreements with EFTA and Central and Eastern European countries. There will be an increasingly significant role for the Community as such in the world scene with respect to maintaining peace and stability, supporting progress in developing areas and protecting the ecological balance of the environment. These developments have most profound implications for the higher education institutions of Europe and they challenge them to define the role which they can play individually and collectively in the strategy of the Community in the years ahead.

This Memorandum is, therefore, designed to stimulate a wide-ranging debate during 1992 both within Member States and at Community level. It is being distributed together with the recent IRDAC report on "*Skills Shortages in Europe*" and is addressed to universities and higher education institutions, to national and regional authorities and to the economic and industrial world.

Brussels, December 1991

Task Force Human Resources
Education, Training and Youth

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The Role of Higher Education

The population of the European Community ***is ageing and declining*** and the labour market is demanding ***more people with higher levels of knowledge and skill*** in order to support an expanding knowledge-based economy. The influence of science and technology as well as the effects of world competition are such as to call for ***a much higher rate of participation in higher education*** and advanced training and for ***a major initiative in upgrading and updating the skills and knowledge of the existing workforce***.

The success of the Internal Market depends on having people who have the capability to operate across national and cultural boundaries. A European dimension in higher education is perceived as a practical economic necessity apart from its desirability on cultural and political grounds. The free movement of people as guaranteed under the Treaty and the directives on the recognition of qualifications for professional purposes create in effect ***a single labour market for highly qualified personnel*** and therefore enlarge to a European scale the frame of reference in which higher education and advanced training are regulated and planned. Recognition of qualifications for academic purposes becomes a natural accompaniment of their recognition for professional purposes and academic recognition of studies completed a necessary support for the mobility of people and for their professional advancement.

The importance of the research function in higher education and in advanced training and the significant contribution which research in higher education institutions can and does make to economic progress is undeniable. There are, however, difficulties in relation to ensuring an adequate supply of researchers and in securing the pluridisciplinary training which is necessary to support many present-day research initiatives. The wider range of research objectives in higher education and in particular the relationship between research and advanced training ***require coherent research policies within and in relation to higher education institutions***, which take account of the full range of research objectives, support the establishment of partnerships and networks and link research and advanced training in such a way as to ensure technological renewal in the economy.

The gaining of higher qualifications and their regular updating and renewal support stability in employment and professional advancement. While all Member States have experienced growth in participation in higher education, initiatives are still needed to bring about ***equality of opportunity*** for certain social class groupings and for certain minorities and also to ensure a better distribution of opportunities throughout working life.

Higher education and advanced training can make a significant contribution to regional development, a matter which has been recognised in the reform of the Structural Policies. This contribution is made through involvement in the planning process, through initial and continuing training operations to raise skill levels, through expert advice and consultancy, through the formation of partnerships with economic life, through research and technological transfer and through incubating new developments of economic value in science parks/development units associated with higher education centres.

The historic relationships which higher education institutions have established throughout the world are looked upon as an asset to the European Community in its growing world role. There is an important part which higher education can play in cementing relations with European neighbours, in the delivery of development assistance and development cooperation and in promoting economic, political and cultural relationships with other major economic regions.

Higher education exercises an important role not only in safeguarding and developing European cultural heritage, but also in ensuring that this heritage is transmitted and shared more widely among citizens and across the boundaries of Member States. In this way it helps to cultivate a "European" affiliation which can cohabit with national and regional allegiances.

New Challenges for Higher Education

The implications for higher education of the changes which are taking place in Europe are extremely wide-ranging and involve questions concerning virtually all aspects of the role of higher education and the contribution it can make to economic, social and cultural progress and to cohesiveness throughout the Community.

They imply ***a review of the activities of higher education institutions and of the relationships between them and also of their relationships with economic bodies and enterprises, Member States and regional authorities and the European Community itself.*** This memorandum identifies a series of actions which could with profit be taken by all of the parties involved in this great enterprise, acting individually, or in concert, which would assist in meeting the challenges of the coming decade. It goes beyond the questions of the existing European programmes and raises a wider agenda of issues in which it argues for a stronger European dimension than exists at present. Without going so far as to espouse common principles, or policies, ***it emphasises the need to ensure that this European dimension becomes much more a feature of the planning and functioning of higher education throughout the Community.*** It identifies the Commission's role as that of a catalyst and a facilitator of cooperative and common action, acting in accordance with the principle of subsidiarity and respecting a diversity of provision and seeking to attain European objectives within these limits.

These developments lead to the need ***to create a "European" education to match the "European" expectation of graduates.*** The higher education institutions are collectively a resource which can contribute significantly to the transformation of Europe. Their contribution to the development of human resources is essential for economic, social, political and cultural advancement within the Community.

Critical areas for development in higher education in the future are identified as follows:

- ***participation in and access to higher education***
- ***partnership with economic life***
- ***continuing education***
- ***open and distance education***
- ***the European dimension in higher education***

III

The contours which define the ***European dimension*** are:

- student mobility
- cooperation between institutions
- Europe in the curriculum
- the central importance of language
- the training of teachers
- recognition of qualifications and periods of study
- the international role of higher education
- information and policy analysis
- dialogue with the higher education sector.

A number of horizontal issues such as the ***balance between professional training and general education***, a strong emphasis on ***quality***, the use of ***information technology***, the need for ***strategic management*** at institutional level and the question of ***financing*** affect all the foregoing.

Participation in and Access to Higher Education

An increased level of participation in higher education can be brought about not only by ***enroling a greater proportion of the relevant age group*** but also by ***catering for more mature students*** through continuing and recurrent education. Social inequalities in participation should also be addressed. ***Common targets for participation within the Community should be considered*** along with support to the regions in attaining such targets.

The larger, new student population will need to be catered for within ***a much more diversified, but, nevertheless, structured system of post-secondary education*** where the system as a whole would be more permeable to students who would receive credit for studies successfully completed in any part of it. Increased exchange of experience between Member States over a wider range of issues as well as reviews of access policies and of cost, quality and output in higher education would be invaluable in this context.

Partnership with Economic Life

A much ***closer relationship between higher education and industry*** is required. There are a number of parameters for such a relationship. Placing higher education/industry partnerships on a more comprehensive footing is fundamental. The ***potential of the UETPs*** (University Enterprise Training Partnerships) within the COMETT programme for realising a better coherence and co-ordination at the higher education/industry interface in the areas of advanced training, research and the dissemination of research results provides a model for further development.

Continuing Education

A much greater involvement in and a much more serious commitment to continuing education is needed in the higher education sector. Given the pace of technological change a ***new balance between initial and continuing education*** becomes an absolute requirement for the future. The promotion of

continuing education in the higher education sector requires new structures at institutional level, new national structures and policies and an impetus from the Community with regard to exchange of experience and transnational cooperation. The higher education institutions will need to make adjustments to their academic structures, to their pedagogic methods and to the system by which they deliver their courses in order to accommodate this new balance between initial and continuing education.

Open and Distance Education

The wider use of open and distance learning is an important way of servicing new needs in continuing education but it also has potential for a much more extensive role in meeting new demands for higher education and in reinforcing existing provisions to extend their range and quality. ***Distance education should cover a wide range of levels and studies*** and ***should be capable of being integrated with institutional modes of study***. There are particular advantages in European cooperation in the area of open and distance education.

The European Dimension in Higher Education

Student Mobility

Student mobility, which is already a feature of Community programmes such as ERASMUS, COMETT and LINGUA, will continue to play an important role in establishing a European dimension. A more ***comprehensive policy*** in this area, involving a ***dismantling of barriers to mobility***, ***an improved access to information*** and ***an enhancement of support programmes*** is needed. The enhancement of incentives to mobility in the form of support programmes would require a substantial increase in provision as well as more integrated forms of partnership between the Community and the Member States. The targeting of some funds within the ERASMUS programme towards particular levels and areas of study could be envisaged in this respect.

Cooperation between Institutions at European Level

A ***comprehensive "European" policy at institutional level*** should comprehend all aspects of academic life. A central element of such a policy is the development of ***cooperation between institutions*** at European level which can lead to ***joint programmes*** of teaching and curriculum development involving ***staff exchanges*** and other means of extending the ***"European" experience of those students who do not have the opportunity to study abroad*** under a structured programme. Exchanges for this purpose could also be envisaged with industry personnel from another Member State. The generation of ***joint research projects*** at both undergraduate and post-graduate levels and at staff level can provide a significant European dimension within an institution. The ***recruitment of foreign staff*** for short and longer term assignments would be another element in such a policy. The growth of structures within institutions to handle European programmes has developed significantly in recent years and a wider responsibility in promoting a European dimension might be assigned to these structures. Involvement in European programmes and in European cooperation generally should be regarded as a positive element in any assessment of academic staff. The progress of European programmes has derived from inter-institutional cooperation and the strengthening of this element would open up possibilities for further development of the European dimension.

The Central Importance of Language

Language competence is regarded as being of central importance to the creation and progress of Europe. A significant beginning has been made with the launching of the LINGUA programme. Notwithstanding any measures which may be taken at earlier stages of education, ***higher education institutions should present a multi-lingual voice to their clientele***. Aspects of a language policy in higher education institutions are the requirement of one or more ***foreign languages as entry qualifications***, the integration of ***language studies with other disciplines***, the provision of facility and incentive to acquire and maintain ***language competence on the part of students and staff*** and the use of ***language as a focus for social and intellectual life*** within an institution. A significant presence of ***students and staff members from other Member States*** can help fortify and strengthen language activities, including ***teaching through the medium of a foreign language***. These developments and the needs of students of all disciplines and in different modes of study for communicative and special language skills would justify a serious ***review of the role of language departments*** within higher education institutions. Cooperation between higher education institutions could provide a more comprehensive service to the lesser-taught and lesser-used languages of the Community.

The Training of Teachers

The necessity to include a European Community dimension in the curriculum of pupils at elementary and secondary levels of education makes it essential that a ***European experience should form part of the professional education of all teachers***. The structure of teacher education and other constraints limit the extent to which this need can be met through study abroad schemes within existing programmes and ***special measures covering the initial and continuing education of teachers are necessary***. Means of providing ***European experience for teachers who cannot avail themselves of a study abroad programme*** should also be developed. The increasing association of teacher education with universities and other higher education institutions should be a forward step and a means of engaging a wider range of expertise in the processes of curricular renewal.

Recognition of Qualifications and Periods of Study

Recognition is crucial to the mobility of students and graduates within Europe whether for study or for work. The variety of study and award systems throughout Europe calls for ***flexible and accurate mechanisms which can handle claims for academic as well as for professional recognition***. There is a great need for ***an information support*** for employers wishing to assess qualifications and for individuals who would wish to take all or part of their higher education in another Member State. There is already considerable work going on in this area through the many inter-university agreements and through the ECTS (European Community Course Credit Transfer System) scheme within the ERASMUS programme. This work can provide the basis for further initiatives which should also comprehend continuing education students and for ***agreements which would facilitate recognition*** on a much more widespread basis.

The International Role of Higher Education

There has always been Community action in this field as well as the traditional range of involvements which higher education institutions have with third countries. The importance of such cooperation in higher education to the European Community's position on the world stage is growing and there is a need to ***intensify developments in existing areas*** and to ***extend activities to other areas on a Community basis*** and with the cooperation of Member States.

Information and Policy Analysis

The developments in higher education and their European Community implications demand a ***better capacity for information and policy analysis at Community level*** which would link educational and labour market information and incorporate data on the mobility aspects of European higher education. Such a capacity for analysis at Community level would be supportive to Member States in their planning and innovation.

Dialogue with the Higher Education Sector

The growing Community involvement in higher education and advanced training requires a ***better and broader framework for advice and dialogue*** and ***a more specific interaction with the responsible authorities*** in these areas in the Member States. Regular discussions with organisations representing the higher education institutions, the teachers in these institutions and the students are also seen as necessary to enable all the actors in higher education and advanced training to be more clearly heard on European issues.

This memorandum is designed to serve as a basis for discussion, particularly in the universities and higher education institutions themselves. It will be issued together with the recent IRDAC report on "Skills Shortages in Europe".

BACKGROUND AND CONTEXT

1 In its communication to the Council "***Education and Training in the European Community: Guidelines for the Medium Term 1989-92***" (COM (89) 236 Final) the Commission underlined the strategic importance of the higher education systems in helping to make the completed Internal Market work. The Council and Ministers for Education meeting on 6 October 1989, took account of these guidelines in setting the principal objectives of intensified cooperation in education and training, marking a new stage in Community cooperation initiated in this field by the Resolution of 9 February, 1976[1]. At this meeting they stressed the importance of "***developing all the educational sectors which are vital for the future of Europe, in particular technical and vocational training and higher education***".

2 In the section of the guidelines dealing with university development in the Community the Commission undertook to issue a special memorandum on higher education. In the course of preparing this memorandum the Commission first organised a workshop at the Catholic University of Leuven in June 1989[2] attended by a group of experts in higher education and it subsequently consulted on a wider basis by organising, in cooperation with the Italian Presidency, a major conference in Siena in November 1990 which was attended by representatives of higher education institutions[3], of ministries and of regional authorities concerned with higher education and of industry and economic life. The memorandum, draws heavily on the discussions which took place at both of these events, and in particular on the conclusions adopted at the Siena conference[4].

3 Developments in higher education and advanced training cannot be considered in isolation and should form part of a coherent approach to the whole field of post-compulsory education and training. The underlying importance of action in the field of human resource development to the furtherance of Community policies and the achievement of Community objectives is highlighted by the range of policy reviews currently taking place and which will lead in the present year to:

- ***a review of the Vocational Training policies for the 1990's together with proposals regarding the right of access to continuing training in companies***;
- ***a memorandum on open distance education and training***;
- ***a first report setting out guidelines designed to improve higher education/industry cooperation based on the experience of the COMETT programme***;

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[1] OJ C 38, 19 February 1976

[2] The papers presented at this workshop were published in the European Journal of Education, Vol 24 No. 4 1989 and the full proceedings are available from the Task Force Human Resources, Education, Training and Youth.

[3] In the context of this paper the term "higher education institution" covers both universities, including those engaged in research based training, as well as all other post secondary establishments of education and training which offer courses of varying duration and of either a general or specialised nature leading to qualifications of a post-secondary level.

[4] The Conclusions and the Background Document from the Siena conference are available from the Commission of the European Communities (Task Force Human Resources, Education, Training and Youth).

4 While the institutions of higher education play a pivotal role in the vital area of vocational and professional training, this role is exercised in conjunction with the wider responsibilities of higher education institutions for maintaining, developing and transmitting the cultural heritage of Europe and of its Member States and for mobilising the creativity of people to advance the boundaries of knowledge, in the humanities as well as in science and technology. ***The training given in higher education is one which should seek not only to impart the highest standards in the mastery of professional skills but also to foster independent judgement, creativity and "esprit critique" and to confer the ability to range across the boundaries of disciplines, cultures and countries***.

HIGHER EDUCATION : A GROWING REQUIREMENT IN THE EUROPEAN COMMUNITY

An Evolving Community

5 In the 1990's there will occur deep-seated changes in many aspects of European society. These changes will be brought about by the increasing pace of European integration following from the completion of the Internal Market in 1992 and the accelerated advances towards monetary and political union. At the same time the inexorable advance of science and technology will continue to produce new knowledge and, in its applications, continue to pervade every facet of economic life and of the daily living of virtually all citizens. The likely enlargement of the Community itself, combined with a closer identity of purpose with its European neighbours, defines for the Community a larger and more immediate scope of interest which has already resulted in increased opportunities for cooperation, partnership and mutual support. A European Community, growing in strength and confidence, will be affirming its unity and identity on a world stage and defining new areas of interaction with third countries and regional groupings throughout the world.

6 ***The acceleration of the process of integration within the Community will result in a more frequent and a more extensive mobility and an enhanced interaction of European people with one another at the economic, social, political and cultural levels.*** It will bring about a consciousness of being able to apply the vast and varied resources of the Community to the solution of Community problems and will promote in Member States a heightened awareness of each other's development strategies and of the desirability of adopting compatible directions when new initiatives are required.

7 ***The challenge of science and technology is central to European competitiveness and economic progress and requires that Europe is in the forefront, not merely in the generation of new knowledge, but also in its dissemination and application to economic life.*** Science and technology will also be interacting more strongly with the cultural, social and human aspects of daily living, bringing new opportunities and constraints and fostering many innovative approaches in society in areas such as urban organisation, industrial relations, manpower mobility, social ethics, health and security and in the arts and cultural activity.

8 At the global level the European Community will have to ***formulate and participate in active world strategies which will support peace and stability as well as the evolution of economic progress and of democracy in developing countries.***

Labour Market Needs

9 Direct and dynamic effects of the completion of the Internal Market in 1992 are likely to generate increased employment. At the same time European enterprises will face great challenges in the form of global competitive pressures and opportunities to develop and apply new technologies. In response to these challenges, enterprises will increasingly place emphasis on the quality rather than the quantity of output, with a direct impact on the level and mixture of skills required. ***The developed economies of Europe must strive to follow high skill strategies in order to increase the flexibility and productivity of their industries.***

10 The ***information technologies and telecommunications*** sector, with an estimated future growth likely to be higher than that of GNP, seems set to be the most important manufacturing sector by the beginning of the 21st century. It will also be the most pervasive, with 2 out of every 3 jobs using its products and services. ***Mastering these technologies will be an essential part of training for the future of European society***. A trend towards more highly educated and multi-skilled workers is expected in service industries as well as in manufacturing. ***It is expected that the proportion of workforces employed in professional occupations will continue to increase***, generating considerable demands in the managerial, sales and marketing areas particularly for people who can operate on a European scale. Engineers, scientists and technology specialists, business specialists, technicians and multiskilled craftspeople are all likely to enjoy a buoyant employment market (see Figure 1). Public service employment may well show a recovery arising from an improving economic situation and from governments' desires to implement political concerns, such as that about the environment, for example, or the further development of social and health-care services for the ageing population.

11 There is evidence about current, sectoral and regional skill shortages from studies carried out by the EC, showing that skill shortages are prevalent in the Community. Skill shortages arise, even during periods of continuing or rising unemployment, because a fast rate of job destruction and job creation is part of a rapidly modernising Europe. ***If those whose skills are no longer needed are not to be left behind in long-term unemployment, bold and expanding policies for the professional and vocational retraining of adults are needed***. One feature of current skill shortages is the ***widespread lack of important generic skills*** and social skills such as quality assurance skills, problem solving skills, learning efficiency, flexibility and communication skills. These are in addition to ***shortages of critical scientific and technological skills***. In the 1990's the skills content of work is expected to increase. There will be a greater proportion of workers needing communications, language, management and organisational skills. More polyvalent forms of education and training will be necessary in order to enable workers to contribute to the objectives of successful innovation, high quality products and processes, flexibility in meeting consumer needs and adaptability to new technologies, new forms of industrial organisation and higher productivity.

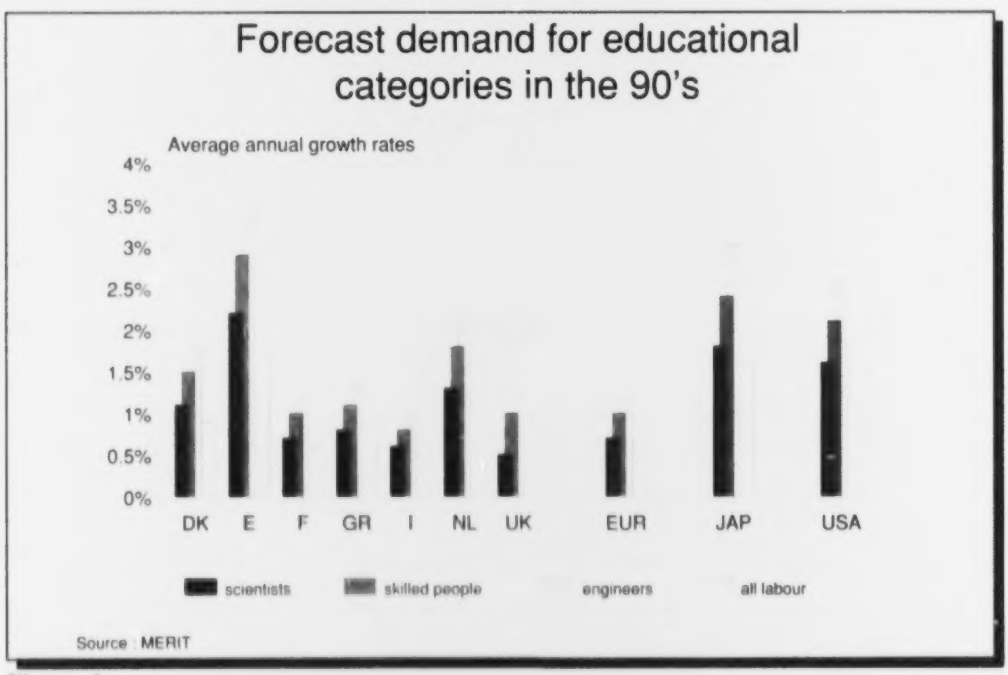

Figure 1

12 A recent report by IRDAC on "Skills Shortages in Europe" directly links training and the development of human resources, particularly at the higher level, with the attainment of economic objectives by stating: ***"The output of education and training systems (including in particular higher education) in terms of both quantity and quality of skills at all levels, is the prime determinant of a country's level of industrial productivity and hence, competitiveness."*** Higher education has a vital role to play in providing a supply-led boost for economic development and in equipping all members of the labour force and young people with the new skills needed to meet the rapidly changing demands of European enterprises. In practice this calls for a renewed emphasis not only on provision of engineering, science and technology skills but also of hybrid, interdisciplinary skills such as those achieved through wide-ranging study, for example, of the social and technological features of information technology and environmental protection.

Demography and Higher Education

13 The growing requirement in the European labour market for individuals with increased knowledge and advanced skills must be seen against the evolution of European demography and current participation in higher education and advanced training. Europe has a declining and ageing population. ***Because of the continuing decline in the birth rate since the mid-sixties, there will be a sharp reduction in the numbers of young people leaving schools in the 1990's, destined either for the labour market or for higher education.*** This is illustrated by Figure 2 which shows the population trend in the Community for the age groups 15-19 years and 20-24 years. While the incidence and rate of this decline varies between Member States[5] it is evident in all States as well as in the Community as a whole.

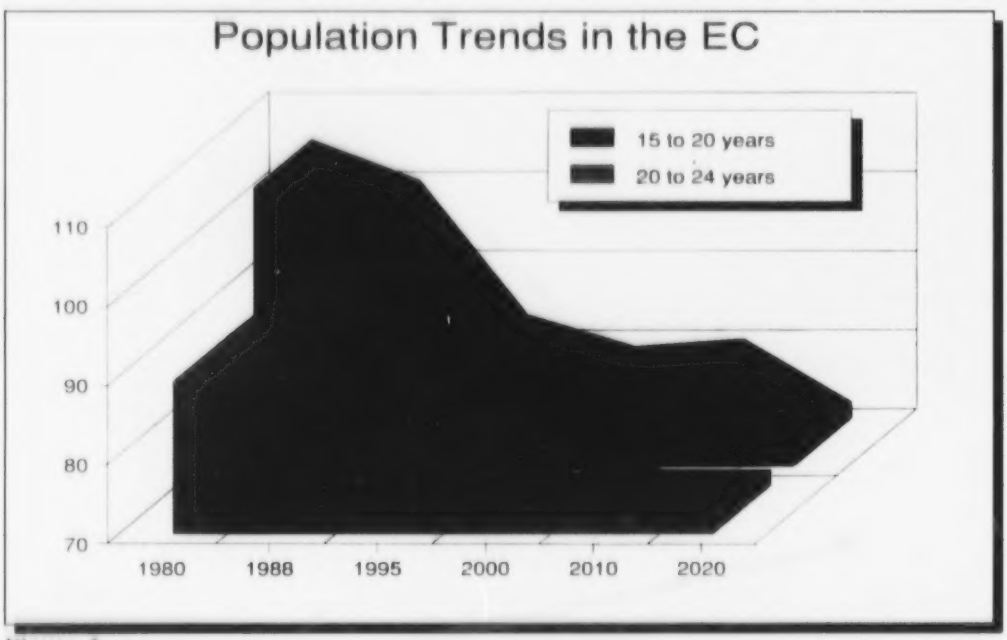

Figure 2

14 The demographic downturn has led to a prediction that by the year 2000 net entry to the

[5] See Tables Appendix 2

labour market will be negative with some 300,000 more people leaving the labour force than entering it. Employer response to a contracting labour supply can vary and involve a number of strategies designed to increase the rate of participation in the labour market or to adjust labour needs. ***The requirement of the economy for higher level knowledge and skills will clearly involve an extension of training time and an implicit reduction in the active labour force***. This reduction, accompanying significant demographic decline, will produce tensions which will highlight the need for establishing new relationships between study and work.

15 These relationships are already called into question by the rapid rate of obsolescence of knowledge and skills, particularly in the areas of science and technology, but increasingly throughout the entire economic milieu. This rate is such that the economy can no longer rely on the recruitment of young graduates to meet its requirements for technological renewal, but must look to an increasing degree to the up-dating and upgrading of its existing workforce through processes of continuing education and training. In this context it should be noted that at the end of the century some 80% of the existing labour force will still be active. ***A new partnership between higher education and economic life must evolve to meet these challenges, one which will take greater account of the changing skills needs of the economies, one which will emphasise flexibility in the forms of delivery of education and training and in the acquisition of qualifications and one which will be marked by a greater commitment by all parties to continuing and recurrent education and training***.

16 The extent to which the demographic changes will affect enrolments in higher education is difficult to predict. These have shown a progressive increase throughout the 1970's and 1980's, both for males and females, in the Community overall and in the Member States. For the twelve Member States the numbers of students expressed as a percentage of the population aged 19-24 years, grew from 16% to 21% for males and from 10% to 19% for females between 1970-71 and 1985-86. ***These levels of participation are generally lower than those in the United States and Japan***. Staying-on rates in full-time education and ***participation rates in higher education are very variable throughout the Community***. New entrants to higher education in a number of Community countries and in the USA and Japan for 1986-87 are shown in Figure 3.

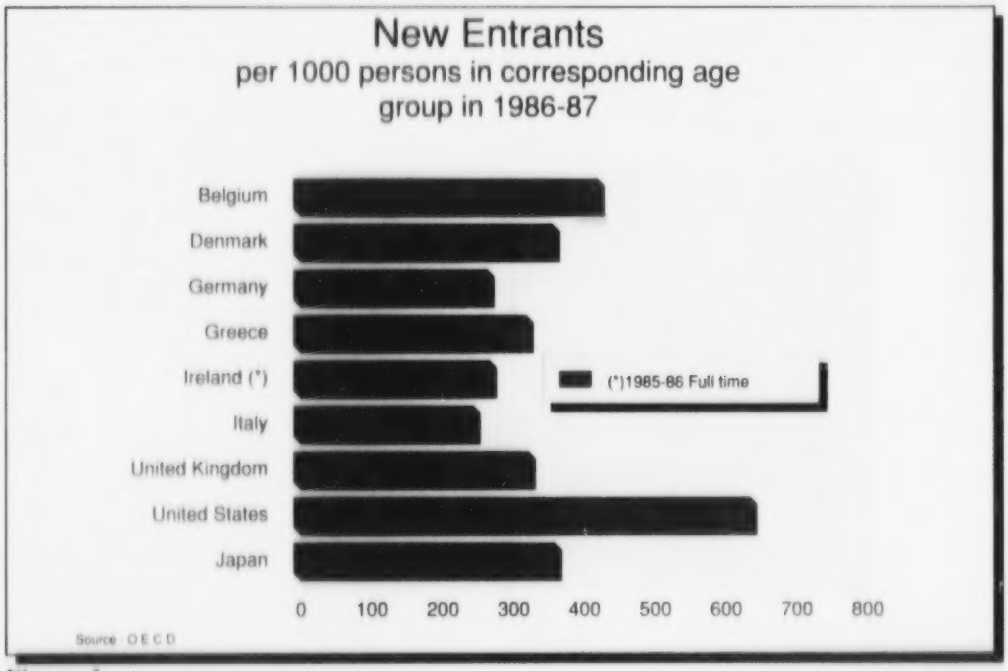

Figure 3

17 Projections of enrolments in the past have always tended to underestimate the demand for higher studies among young people. This demand is fuelled by changing social structures and cultural values as well as by the demands of the labour market for more highly educated manpower. As these factors will not only persist but will become more acute in the coming decade, ***an overall increase in demand for higher education would appear likely. This increase should reflect the circumstances of the new decade and show a more even growth in the participation of males and females and a greater expansion in part-time and continuing education students***.

Mobility and the Internal Market

18 The Single European Act states: "***The internal market shall comprise an area without frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the Treaty***". The success of the Internal Market depends to a large degree on the capacity of people to accept and exploit the freedoms accorded to them, to be able, where necessary or desired, to live and work in other Member States of the Community, to trade and offer services across national boundaries and to cooperate effectively with partners in other parts of the Community in agreements, contracts and joint undertakings. This, in turn, depends heavily on the ***ability to communicate and on understanding the economic and social structures in other Member States***.

19 European involvement, including mobility, will be at its highest among people with advanced educational levels and the functioning of the Internal Market will require significant numbers of people who would have these extra European dimensions in addition to their normal professional qualifications. ***It would be desirable, therefore, on economic grounds, apart altogether from political or cultural considerations, to provide for a European dimension in the education of all students.*** The provision of such a dimension represents a challenge and an opportunity for all the parties involved in higher education.

20 The free movement of persons in the professional sphere and the offering of services across the boundaries of Member States have been facilitated by the Council Directive "***on a general system for the recognition of higher education diplomas awarded on completion of professional education and training of at least three years' duration***" and by sectoral directives governing the mutual recognition of qualifications for professional purposes. While within the terms of the general directive, no effort is made to harmonise the content and duration of professional training across the Member States, it is considered likely that ***one of the practical effects of the directive will be to stimulate movements towards convergence in the training for particular professions***. Cooperation and agreement between systems of higher education become necessary, too, in order to enable mobile workers and their families, who may be seeking to commence or to continue higher education on the basis of educational qualifications obtained in another Member State, to proceed with their studies.

21 ***The free movement of persons and the recognition of qualifications for professional purposes create, in effect, a single labour market for the categories of persons concerned*** and this clearly has implications both for the supply of and demand for highly qualified personnel. Training facilities at these levels are planned on a national basis and in some instances access to training is controlled by ***numerus clausus***, or by some form of competitive entry system to a fixed quota of training places, related notionally, at least, to national requirements. Where Member States can satisfy their skills shortages by recruitment outside of their national boundaries and where access to training also has a degree of independence

of national constraints, it is very clear that ***the overall question of matching supply to demand takes on a larger European perspective***. Such a perspective would obviously have to take account of the position of the regions and, through structural policies or other means, ensure that freedom of movement did not run counter to the Community's aims of social and economic cohesion, in particular by encouraging a brain drain from the regions.

The Research Function in Higher Education

22 The economic objectives of the Community must be viewed in the light of global competition and also take account of the pervasive effect of science and technology on industry, business and services. ***Prosperous economies today are based on the capacity to innovate with respect to product and process***. This capacity, in turn, is based on the ability to carry out relevant research and development and apply its results rapidly in the processes of production, distribution and sales. In this respect, Europe faces a number of problems. ***The relative number of people engaged in research in Europe is less than it is in her major global competitors***. Moreover, within the Community, the discrepancy of this indicator between some countries may be of a factor of 6 which makes the European position weaker and more critical. Reports from the higher education institutions would indicate that ***many talented graduates are no longer taking up research openings***. In the institutions themselves, renewal of academic staff, which often generates new research impetus, has slowed down considerably although faculty retirements in the next decade should present major opportunities for renewal. A further difficulty becoming apparent is the ***diminishing proportion of students attracted to studies in the areas of science, technology and engineering***.

23 Another significant challenge at the present time arises from ***the underdevelopment of pluridisciplinary training and research*** which is creating serious obstacles to progress in intersectoral innovation. The present structures of studies in higher education institutions as well as the criteria applied to advancement in academic careers tend to inhibit this development. As the practice of research moves more towards pluridisciplinarity, it will be necessary for higher education institutions to ensure that adequately trained personnel are available both for the conduct of research and for the management of its application to business and industry. In this context it is also necessary to underline that ***the benefits of a greater and more concerted effort in research and development cannot be fully realised unless the level of understanding of science and technology generally in society is such as to support the rapid and widespread diffusion of innovation and new technology***.

24 The economic imperatives of research and development in science and technology require that the vast potential of the higher education institutions for this purpose be properly organised and exploited and that no discontinuities of policy impede the contribution which can be derived from higher education sources. At the same time it must be recognised that the ***involvement of higher education institutions in research is prompted by more than economic considerations*** and that the range and type of research in higher education institutions must cross the boundaries between pure and applied research and must also accommodate the pursuit of knowledge for its own sake, the use of research for informing and effecting teaching and the conduct of research in academic areas which have little apparent prospect of economic application. ***In this respect the linkage between the quality of teaching and the quality of RTD activities in higher education institutions must be stressed.***

25 For all these reasons it is important that ***there should be national and institutional policies comprehending the full range of research objectives in the higher education sector***. These

policies must encourage and permit the institutions to enter into partnership with economic life and to conduct projects on behalf of, or in conjunction with, public and private enterprise. They must stimulate and facilitate partnerships and networks within and across the boundaries of Member States so that the critical mass for effective research and for interdisciplinary developments can be attained. These partnerships are also important in the vital area of training researchers particularly at the doctoral level. This is already the case within the Community RTD cost-shared actions, where hundreds of young researchers are trained in an industrial environment. This training will be enhanced within the specific programmes of the Third Framework Programme. ***A constant dialogue and interaction between authorities responsible for research and those responsible for education and training is essential at institutional, regional, national and at Community level in order to ensure a proper articulation of effort between these two very important sectors***. Advanced training and re-training is an important way of diffusing the new knowledge resulting from research not only to the new generation of professionals, but also to those already in the economy. This is why the Commission is taking steps to inter-relate its research and development programmes and the action programmes in education and training such as COMETT and ERASMUS and is supporting the development of information technology in training as in DELTA and VLSI action.

26 Further to the decision of the Council on a Third Framework Programme for Community activities in the field of research and technological development (1990-1994), the Commission has proposed a specific RTD programme in the field of Human Capital and Mobility. The central objective of this programme is to increase quantitatively and qualitatively the human resources available for RTD which will be needed by Member States in the coming years. This action will focus on two main aims: the training and mobility of staff, in particular young researchers at post-doctoral level, and the setting up of networks of scientific cooperation and training.

Higher Education and Social Policy

27 Action in the field of higher education is intimately connected with the achievement of the social policies of the Community with regard to improvement of standard of living and of employment opportunities. The changing structure of work is demanding higher qualifications of workers and continuing training to meet changing needs. There is widespread evidence of a deteriorating job market for the unqualified and underqualified and it is evident also that ***the better qualified enjoy greater job stability as well as higher living standards***.

28 The growth of higher education in the sixties and the seventies was to some degree led by manpower and economic considerations, but social considerations were also strongly to the fore. The aim of the social dimension was to secure equality of opportunity for young people to develop their talents and skills without regard to their financial means, social class, gender, ethnic origin, or geographical location of residence. This policy was affirmed by the Council and Ministers for Education of the Community in their 1976 programme which stated that "***the achievement of equal opportunity for access to all forms of education is an essential aim of the educational policies of all the Member States and its importance must be stressed in conjunction with other economic and social policies in order to achieve equality of opportunity in society***."

29 ***While participation in higher education improved in all Member States the differences between them are still such as to warrant Community attention and, where applicable, action within the terms of structural policies***. Significant progress has been made in

equalising the participation of men and women. Despite the introduction of student support and other measures, participation remains unevenly distributed among the social classes with under-representation persisting among young people in the lower social class groupings. This may well require action at the secondary level of education in the first instance.

30 Progress has also not been significant in equalising opportunity throughout working life and though there has been some growth in recent years in the numbers of mature and non-traditional students, the systems and policies underpinning higher education remain strongly directed to the needs of the school-leaving population. Special programmes will continue to be necessary to deal with minority and disadvantaged groups.

Higher Education and Regional Development

31 The availability of trained manpower and familiarity with new and advanced technology are important components of any regional development strategy. The reformed Structural Policies envisage investment in public infrastructure of economic importance including ***inter alia*** vocational training centres, advisory and support services for businesses, the cost of studies and expert reports in the agrifood industry and in fisheries, operational programmes in vocational training and special aid for structures and services tailored to meet the needs of SME's, including training aspects, technology transfer and innovation.

32 Higher education and advanced training interact with regional development at a number of different levels. The very presence of a higher education institution in a region represents an investment around which a number of services will grow. It makes an area a pole of attraction for investment on account of the availability of highly trained manpower so necessary to the success of modern enterprise. A higher education facility represents a resource of knowledge, advice and research which can be availed of by business and industry. The innovative and creative environment generated around a higher education institution stimulates the generation of profitable developmental ideas. At the social level, a higher education facility stabilises population in an area and makes it possible to attract and retain workers with the key skills required for regional development. The revision of agricultural policies within the Community would also appear to call for special efforts to bring opportunities for higher education and advanced training more within the reach of those residing in rural areas.

33 ***The adoption by higher education institutions of active policies of partnership with economic life can make a major input to regional development.*** Such partnerships are reflected in the placement of students, the interchange of staff, the use of resources, the determination of continuing training needs and their delivery and the provision of advice and other consultancy services. In the case of SME's, particularly, which often are the life-blood of regional development, these partnerships can become the means of identifying and supplying the training they require to cope with technological change, something which would not happen in the absence of the impetus deriving from partnership. The involvement of the higher education institution in open and distance learning puts it in a position to answer more flexibly the initial and continuing training needs throughout the region. Partnership implies a reciprocal dependence which would also have the representatives of economic life involved at appropriate levels in the affairs of higher education institutions, thus reinforcing this mutual dependence. ***A model for such partnerships exists in the University Enterprise Training Partnerships (UETPs) within the COMETT programme and the remit of such partnerships could be extended to comprehend a supportive regional development role.*** These UETPs have the added advantage of networking with institutions and enterprises in other Member States and being able thereby to bring a wider perspective of knowledge and experience to

bear on the solution of problems at the regional level.

34 ***The research capacity of higher education institutions can also be channeled to support regional enterprise and regional development.*** Many regional enterprises do not have the means to carry out their own research nor are they part of a structure which makes them aware of research findings relating to their enterprises. Often they would not have the capacity to translate such findings into actions of applying new methods and new techniques and of developing new products. Higher education institutions can take account of these needs in their information, networking and laboratory resources and can support regional enterprise through technology transfer and by carrying out research projects on behalf of or in conjunction with the enterprises concerned. This research capacity can also be an invaluable backing to regional development agencies in conducting surveys, in determining regional needs, in drawing up inventories of regional resources and in devising and piloting models of development plans. In many regional settings higher education institutions have established science parks/incubator units where new products and processes are developed to pre-production stages, where new ideas are tried out and where new enterprises, based on these ideas, are nursed through their developmental stages.

Higher Education and External Relations

35 There are historic linkages and relationships between higher education institutions in the different Member States and various countries in the world. These relationships are reflected in student and staff exchanges, joint projects with counterpart institutions, the enrolment of foreign students and the participation of the European higher education sector in the provision of technical assistance to projects in many developing countries. In a number of European institutions there are departments devoted to the special study of languages, cultures, economies, political systems and developmental needs of third countries. ***These historic relationships provide an excellent basis through which the Community can build its relationships with the countries concerned.*** There is also a growing interest in European studies courses in institutions outside the Community.

36 Already education and training are coming to play an increasingly significant role in the external relations of the European Community and political agreements are often preceded by, or incorporate arrangements within the areas of education, training and culture. Initially this role was seen in the context of development assistance to the ACP countries under successive Lome conventions and of development cooperation with the countries of the Arab world, Asia and Latin America. ***The new cohesive Europe will need to maintain, strengthen and enhance its commitment in education and training to these countries*** building wherever possible on the historic relationships of higher education institutions. As far as RTD activities are concerned, a number of scientific cooperation agreements have been signed between the Community and these countries, including advanced training actions.

37 An enhanced role for education and training in the external relations of the Community is evolving for a number of reasons:

- ***education and training, through interactive exchanges at staff and student level and through study abroad schemes, help to cultivate the mutual understanding, respect and knowledge on which successful political and trading relationships can be based;***

- ***education and training provide an instrument for wider dissemination of knowledge concerning the European Community and its institutions and policies and help***

therefore in defining its position on the world scene;

- ***education and training must provide the skills that are necessary for economic development and for political and social progress;***

- ***no nation, or group of nations, has a monopoly of ideas and knowledge and learning from and drawing comparisons with other countries is an important component of the Community's own development and that of its Member States;***

- ***educational institutions of the Member States of the Community are the custodians of much that is valuable in European culture and civilisation and they can become, therefore, the instruments of cultural exchange on a global basis.***

38 Evidence of the enhanced role of education and training in the external relations of the Community is seen in the conclusion of agreements with the EFTA countries regarding participation in COMETT and ERASMUS and in the 1990 joint declaration by the Community and the USA on cooperation in the field of higher education. Participation by the EFTA countries in other Community education and training programmes has also been agreed as part of the European Economic Area Treaty. The economic and political transformations in Central and Eastern Europe have given rise to the TEMPUS programme which promotes collaboration in the field of higher education with the countries in these areas.

39 The involvement of other European countries in Community programmes was reaffirmed by the Ministers for Education in their informal meeting in Siena in November 1990. The European Council, meeting in Rome in December 1990 indicated its intention to provide technical assistance to the Soviet Union and it is clear from the fields of technical assistance mentioned that higher education and advanced training will be involved.

Culture and European Integration

40 While Europe must strengthen its world presence and keep its mind, outlook and institutions at all levels open to the development of a global perspective, it is necessary to remember that ***closer integration within the Community itself remains the primary objective***. The Community has a rich diversity of languages and culture and the process of integration must be such as to ***preserve this diversity*** as it represents a storehouse of wealth which can contribute to the lives of all European citizens. The access to this storehouse, the mastery of other European languages combined with the knowledge of other European cultures, is part of the very essence and rationale of European union.

41 The European Council at its meeting in Rome on 14 and 15 December 1990, asked the Intergovernmental Conference to bear in mind the wide recognition of the need to extend or redefine the Community's competence in the area of "***safeguarding the diversity of European heritage and promoting cultural exchanges and education***". At the same Council meeting was also stressed "***the importance of the support which young people can bring to European integration***" and a hope expressed that Community action in this area will be extended.

42 In the context of a resolution of the European Parliament arising from a report of the Committee for Youth, Culture, Education, the Media and Sport (Herman's Report)[6]several references were made to the importance of the European dimension in the education of all students and the Parliament reminded the competent authorities of "***their responsibility to prepare their citizens for European unification through education and training***".

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[6] Resolution on the European Dimension at University level, with particular reference to teacher and student mobility (OJ C 48 25.02.91)

43 While the broader implications of the Council's request and the Parliament's resolution would need to be assessed in respect of all levels of education, higher education has the potential to make a significant response to these concerns. The strength of its position arises from the range of studies available in higher education institutions, from its responsibility for training for the cultural professions and from its commitment to research which implies developing cultural heritage as well as transmitting it.

44 There is, moreover, a growing conviction in higher education that a proper balance should be kept between general and specialist education, especially at undergraduate level. It is fortunate that the actions which would support the training of graduates for mobility and for successful operation within the single market and contribute to the process of transmitting culture and developing European identity are in accord with this educational conviction. Of particular importance in the higher education sector is the age and experience of the students which better enables them to be responsive to a grand political design.

45 The higher education institutions are supported in the work of preparing Europe's future citizens by the wide range of intercommunity partnerships which they have developed, both on their own initiative and through involvement in Community programmes such as ERASMUS, COMETT, LINGUA and the framework programme for research and development. The European University Institute in Florence and the Jean Monnet Project also make highly significant contributions to this process.

Higher Education : the Challenge

46 **All of the foregoing factors call for the devotion of greater attention to the achievement of European excellence in the development of human resources, a challenge to which higher education and advanced training must respond. The efforts made in this regard should be designed to:**

- **provide the extended knowledge and skill requirements needed to exploit fully the economic advantages of the internal market;**
- **strengthen Europe's position in the global economy by the application of scientific and technical innovation to business and industry;**
- **take account of the particular demographic position which exists within the Community in meeting labour market needs both qualitatively and quantitatively over the next two decades;**
- **provide a distinctive contribution to the affirmed policies of the Community in relation to economic and social cohesion;**
- **recognise the extent to which cooperation in higher education and advanced training is becoming more and more a feature of the Community's relationships with third countries;**
- **affirm the importance of safeguarding and strengthening Europe's cultural heritage in all its diversity;**
- **promote understanding across national boundaries so as to reinforce the concept of the Citizen's Europe and to strengthen, among young people in particular, the basis for further political development and for European Political Union.**

HIGHER EDUCATION : NEW EDUCATIONAL NEEDS AND POLICIES

Introduction

47 Much has been achieved in cooperation in higher education and advanced training since the introduction of the first action programme in 1976. The closer integration of the Community and the recognition of the development of human resources as a factor critical to its future advancement, economically, socially, politically and culturally, calls for a further examination of the extent and level of cooperation, building on the progress that has already been made.

48 Higher education and advanced training is a vast and complex enterprise. Throughout Europe of the twelve there are more than 3,500 higher education institutions, serving approximately 6.75 million students. The higher education systems represent an enormous investment and expenditure on the part of the Member States, regional authorities, individuals and latterly on the part of the Community itself. The systems are ***characterised by a high degree of diversity***, differing in languages used and in the cultural backgrounds of participants; differing in the structures within which they operate, in the extent of their diversification and in the degree of autonomy which they enjoy; differing in the duration, level, content and academic structure of their courses; differing in the degree and nature of their involvement with research; and, finally differing in the resources available to them which reflect the levels of social and economic development in the regions of the Community. Practically all of these systems were designed with regional or national purposes in mind, to meet the requirements of regional and national labour markets and to maintain and transmit national cultural positions. The graduates were prepared to meet the expectations of regional and national employers and equipped to live active civic and social lives in their communities.

49 With the mutual recognition of professional qualifications, the mobility of labour and the development of a European labour market, are we beginning to witness the emergence of a "European" expectation by employers of future employees? ***As European opportunities become available these will very likely demand a "European" education, or at least one with a significant "European" content***. Students in the future may well see their needs as being better served by taking part-courses in higher education institutions in different Member States rather than completing their studies entirely in their home state. They will be in a position to exercise to an increasing degree the freedom conferred on them by the Treaty and extend their options and choices by studying in another Member State. ***The critical question is whether this huge, diverse system can be given a European focus in order to realise Community objectives***, including those of sharing Europe's cultural wealth among European citizens and promoting a European identity and commitment that will coexist with regional and national allegiances. ***Can these systems together establish and maintain supremacy in research, produce the graduates who will have mastered the requirements for managing technological innovation, supply the people who can move freely through Europe in the conduct of their affairs, inspire the scholars and the philosophers, the political and social scientists who can lead the political and cultural development of Europe in the 21st century and represent her interests on the world stage? This is an ambitious, but a necessary prospect.***

50 To better focus on such a prospect a number of areas have been selected for discussion in this memorandum where new initiatives might be called for on the part of the higher education institutions, the Member States and the Commission. While a European Community dimension pervades all of these areas, the first four

- ***Participation in and Access to Higher Education***
- ***Partnership with Economic Life***
- ***Continuing Education***
- ***Open and Distance Education***

are areas where changes would have had to be faced by higher education systems even within a national context though the approach to them is clearly transformed by the implications of Community membership and by the opportunities afforded at the Community level for cooperation and joint action.

51 The willingness to cooperate, to exchange experience and to take Community considerations into account in formulating the responses to the challenges of the nineties and beyond, will not, however, make full impact unless accompanied by a firm statement of a ***European Community Dimension in Higher Education***. The contours of such a statement are defined under the following sub-headings:

- Student Mobility within the Community
- Cooperation between Institutions at European level
- Europe in the Curriculum
- The Central Importance of Language
- The Training of Teachers
- Recognition of Qualifications and Periods of Study
- The International Role of Higher Education
- Information and Policy Analysis
- Dialogue with the Higher Education Sector.

52 While the Commission fully endorses the need for higher education and advanced training to interact closely with economic and social life, it also recognises the civilising role of higher education. The pressures for more professional education have led to a widening of the range of post-secondary institutions, so that balance between general and professional education can be achieved in part by having institutions with different roles. The question remains, however, particularly for the universities, whether the gap between the professional/technical and academic/scholarly streams will grow. Such a development would be a danger because ***the modern economy and society need generalists as well as specialists and need graduates who are able to grasp complex problems and to communicate effectively***. A further aspect of this balance is the extent to which general education should be maintained as part of professional training and also the degree to which the study of the humanities might be strengthened by combining them with supplementary technical and professional programmes which would facilitate the employment of humanities' graduates in the growing services sector. ***All of these factors indicate a blurring of the boundaries between general and professional education and the need for a new consensus on questions of curricular balance.***

53 A further horizontal issue of fundamental importance is that of ***maintaining and enhancing the quality of higher education***. The strongly competitive nature of modern society and its dependence on human knowledge and skills is such as to place increasing emphasis on the question of quality. This emphasis is heightened by the large investment of public finance in higher education which ***makes assurance of quality a necessary part of political***

accountability and, in some instances, a basis on which public funding is allocated. Information which would support valid judgements concerning quality is seen as necessary to the exercise of responsible choice among the potential consumers of higher education. Quality, too, is observed as a factor in the determination of contractual relationships between higher education institutions and other partners. This growing interest in quality is reflected in the concerns of the Member States that structures should exist which would ***enable the higher education institutions themselves to monitor the quality of teaching and research work going on within them*** and which would encourage an increased consciousness of and emphasis on quality in all that they do. The wider issue of comparative quality, its assessment, its role in funding decisions and the question of public access to information in this area is also under discussion.

54 The widening perspectives of higher education institutions in Europe would add ***a European dimension to the entire question of quality***. Quality judgements would tend to influence institutional choices in the establishment of partnerships and participation in networks within European structures and would also be a factor in the granting of academic recognition and hence in facilitating mobility. These judgements will also come into play among students in exercising their choice of institution and course in a more open and accessible European market for higher education. Employers, too, will need to exercise quality judgements in a single European labour market in which mobility is underpinned by mutual recognition of diplomas for professional purposes. In this context the question also arises as to whether employers should be more closely involved in the determination of the conditions under which this mutual recognition is granted. ***It is important in this wider perspective that quality is viewed as a larger issue than comparison within and between Member States and that the potential for exchange of experience and for cooperation at Community level in the determination of the parameters of quality and in their assessment be exploited as fully as possible***.

55 Quality of trained manpower also implies the ability to master access to and management of information necessary to cope with technological change. Information and communication technologies (ICT) are becoming all pervasive. They not only render their own older versions obsolescent, but also affect all other scientific and technological disciplines which incorporate older versions of them. They bring an extra dimension to all aspects of economic and social life as the most advanced tools for increased access to knowledge. The penetration of ICT is progressively changing the modes of access to education in all fields very much as the introduction of printing did in respect of books after Gutenberg. ***In the circumstances, a universal ICT literacy is seen as a requirement of the future***. Computer and communication networks also provide an infrastructural means for the multi-site coordination of interdisciplinary education. ***The diffusion of ICT skills through the general population can be achieved only through a massive effort in training, particularly in higher education***. For launching new actions in this field, account could be taken of experience gained by existing training activities in the context of R&D programmes in the field of ICT, such as DELTA on one side and the VLSI design action and the Networks of Excellence on the other. The latter have provided an evolutionary path towards a better integration between industry, R&D and higher education and have been shown to have positive attraction to SMEs.

56 Extensive changes of the kind envisaged have inevitable financial consequences and ***pose questions regarding the level and form of financing of higher education and advanced training***. A recent study carried out for the Commission ("Public Expenditure on Higher Education: a comparative study in the EC Member States) shows that the level of public expenditure as a percentage of gross domestic product and as a percentage of total public expenditure has declined for the European Community as a whole over the period 1980-87.

This period was also marked by a growing convergence in these indicators among Member States. The higher education share of total educational budgets remained relatively stable for the Community as a whole, with some increase in most of the peripheral Member States. It is against such a background that the future challenges to higher education and advanced training have to be viewed.

57 In the competition for scarce public resources there has been considerable pressure on higher education institutions to diversify the sources of their funding and to seek support from other providers both in the public and private domain. This has been particularly the case in research where contracts have been engaged with public agencies (including the EC) and with private enterprises. There has also been increasing emphasis on the sale of services, notably training and consultancy services to industry. While these movements may alleviate the financial position of institutions they do not address the basic issues involved in the financing of higher education and advanced training. ***An increasing service cannot be maintained with declining expenditures***. While gains can be achieved for a period through efficiency measures, there are limits to the extent and quality of service that can continue to be provided in these circumstances.

58 With the overall population of pupils at the primary and secondary levels of education decreasing, arguments can be adduced for allocating an increased share of total education budgets at existing levels to higher education and advanced training. Extra resources beyond these levels, however, must accrue from either public or private funds and questions regarding tuition fees, student support and loan-financed education arise for consideration, not only in the area of fulltime higher education, but also in the developing areas of continuing education and open and distance learning. The debate concerning the most efficient form of public funding is also one which will continue and intensify. The financing of the European dimension in higher education and advanced training will also be of concern to the Community as will their critical role in the achievement of structural policies. The mobility of highly qualified personnel, which represent a considerable investment on the part of Member States, can clearly raise further issues concerning resource transfers within the Community.

59 The issues set out in this memorandum are seen as challenging the present structure and management of higher education institutions throughout the Community and requiring a dynamic and continuing process of change if the demands on higher education over the next two decades are to be met. Even with supportive policies at Community and at Member State level, ***the changes are such as to require the principal responses from within the higher education institutions themselves and the adoption of institutional policies and priorities which would give effect to these changes***. The scope of these changes is extremely wide-ranging and they pose challenges for the academic staff of institutions in all disciplines and in all areas of activity. ***Successive issues make reference to catering for a larger and more diverse student population, to a wider and more interactive framework of curricular planning, to new structures of study and modes of assessment, to changes in teaching methods and in course delivery, to functioning in partnerships with other institutions and with industry both in teaching and in research, to creating a European ethos in all aspects of institutional life***. These changes carry considerable implications for human resources policies within the higher education institutions. As well as calling for a massive initiative in staff development, they imply also new contract forms, new relationships and in many cases, modified approaches to recruitment and to academic advancement all of which highlight the need for adequate consultation procedures. The implementation of changes of this kind requires the support of a committed and far-seeing institutional administration which is free to exercise itself in the area of ***strategic management*** and to be ***flexible in its responses*** to new conditions and new circumstances. Such an approach might best be supported by

increasing authority at institutional level, subject to greater accountability within a pre-determined policy framework. In the area of strategic management, in particular, much can be gained from a sharing of expertise at Community level.

Participation in and Access to Higher Education

60 The arguments for increasing participation in higher education at the present time may be summarised as follows:

- ***the advances in technology and their applications to economic life have raised significantly the knowledge and skill levels required by the European workforce in order to remain competitive***;
- ***the establishment of the European Community with its wide diversity of languages and cultures generates a requirement for higher educational attainments in order to put people in a position to exploit the advantages of the internal market and exercise their citizen's responsibilities within a wider Europe***;
- ***changing social and cultural values and generational effects of previous increases in participation in higher education are leading to increased demands***;
- ***structural policies depend very strongly on a highly qualified workforce for their realisation***;
- ***increased participation is a necessary consequence of realising the stated aim of "achieving equal opportunity for access to all forms of education"***;
- ***the economic, social and cultural progress within an increasingly integrated European Community is such as to support the making of a significant step increase in the educational levels of its population***.

61. The Commission is convinced by these arguments. Their acceptance by the Member States would imply, not only providing for natural increase in demand, but also stimulating and encouraging even further demand. Explicit actions would have to be taken to increase the participation of under-represented groups and to promote the growth and status of continuing and recurrent education. It is, of course, a matter for each Member State to set its own targets for growth both in the overall quantitative sense and in respect of particular courses and disciplines. ***The adoption of common targets of participation for achievement over a period of time with the Community assisting the regions in the realisation of these targets, could be contemplated***. The Community dimension, including the mobility of students and of qualified professionals, should be taken into account in planning for growth, and cooperation and exchange of information at Community level would appear essential to attaining a wider planning perspective.

62 The means of bringing about growth is also a matter for the individual Member States and their higher education authorities as they differ very widely in their existing levels of participation, in the ways in which their higher education systems are articulated with secondary schooling, in the access policies which they adopt and in the structures of higher education itself. The main elements of growth policies, however, would take the form of:

- ***actions at the secondary level of education to increase the stock of qualified school leavers and to influence demand in the direction of perceived needs for higher level skills. These actions could involve investment, reorganisation, curriculum reform, strengthening guidance and counselling provisions, special supports to encourage children from under-represented groupings to complete secondary education;***

- ***actions at the point of entry to higher education. These actions are generally directed at facilitating the process of entry and over a wider spectrum of the population. They can take the form of greater flexibility of academic entry conditions, acceptance of vocational qualifications gained at secondary level or during vocational training, provision of "access" or preparatory courses, giving credit for "maturity", work experience and training achieved in the workplace;***

- ***changing the structures of study. This may involve the introduction of single courses, part-time courses, modules, short duration courses, developing more the capacity of students to organise their own studies, individually or in groups, and, generally, a more diversified system for a more diversified student population;***

- ***reviewing the costs of higher education to the individual. This involves the introduction or amendment of support schemes in the form of grants, loans, tax concessions, deferred payments, indirect subsidies and the range and conditions of their application. It also involves financing policies with respect to dependence on tuition fees and the extent to which fees are levied on different types of participants, on different courses and different modes of study;***

- ***providing an increased number and a better distribution of study places through increased provision and improved efficiency and productivity measures. This would involve, inter alia, putting stronger emphasis on the performance of teaching.***

63 There would be considerable value in the exchange of experience and the wider discussion of planning objectives in the achievement of growth and Member States should be facilitated in achieving such exchanges. Change can also provide opportunities for convergence of policies in particular directions. The Commission advocates that ***policy changes relating to increased participation should serve to equalise opportunities for under-represented groups and between the Member States***.

64 How to cater for a substantially increased and significantly different student body is a question which will have many different facets. Some Member States have already diversified their provision and have made shorter, more vocationally-oriented courses available in separate institutions or as part of the activities of existing institutions. Others are planning to make such provision. A new student population, comprising a greater proportion of school leavers and of mature students within a framework of continuing education, obviously requires a great diversity of provision in terms of whole-time and part-time courses, long courses and short courses, single subject courses and structured courses, updating courses, upgrading courses and knowledge-extension courses. ***The task of higher education will be to fit all of these into a post-secondary structure which best services its new clientele***. It is important that the component parts of such a structure, their tasks and their missions as well as the connections between them should be well defined in policy terms. Whatever the nature of the structure it is extremely important that it should not prevent students who are willing and able from progressing to the highest possible level in their studies.

65 Extended participation obviously needs an accompanying financial commitment in order to provide and service places for an enlarged student body. The implications of such a commitment would prompt an examination of systems in terms of cost, quality and output. It would be necessary, too, in most Member States, to review financing structures to better reflect new priorities. ***The question of who should bear the cost of higher education and in what proportion, and the manner in which public education subsidy is applied is one which might benefit from discussion at Community level***. Efficiency measures could go some way towards financing increased participation.

66 There exists, too, a challenge for institutions in providing the variety of teaching and of course delivery which can cater for the new and more heterogeneous student body. The development of the necessary pedagogy and of the basic resources for the flexible delivery of courses are areas where cooperation and joint action are distinctly possible. ***Different institutions with different course structures can establish linkages through "passerelles" or units/credits, a system on which work is already taking place both in Member States and at Community level***. The growth and adoption of such systems depends on the willingness of institutions to enter into partnership agreements both within and across the boundaries of Member States. Not only is the permeability of structures increased in this way, but it provides also a means of facilitating continuing education and permits of new combinations of study and work. Systems of this kind could also be effective in reducing the incidence of student drop-out without qualification.

67 While the question of access takes on a new meaning in the context of a wider and more varied student body and a variety of ways of pursuing higher education courses, problems associated with access will not disappear. A residue of apparent unsatisfied demand will continue to exist as long as students do not gain places in the course and institution of their choice. The new context should serve, however, to moderate the problems by reducing the "***once and for all***" nature of higher educational choice. ***A review of access*** and its use by governments in the regulation and distribution of higher education opportunities would appear necessary in this new context and could be usefully carried out in concert without binding any party to a unique solution. Such a review would be justified also by the growing concern of authorities to have the needs of the labour market reflected in graduate output and to ensure that students are distributed equitably in reasonable correspondence with the availability of facilities. ***Policies of numerus clausus will also have to be looked at in a European context in the light of mobility of students and graduates***.

Partnership with Economic Life

68 The increased social and economic expectations of higher education at the present time, combined with the changing and competitive climate within which it exists, causes it to be seen as very much a part of the economic fabric. At the same time companies who are faced with developing structured training programmes for their employees and for the users of their products and who are increasingly involved in research and development at a level equal to or surpassing that in higher education are taking on many of the characteristics of higher education institutions. This is reflected also in altered management styles which encourage team-work and foster creativity and entrepreneurship at all levels. This convergence of interests can help create a new climate of partnership between higher education and industry and the professions where cooperation and collaboration is actively sought by all sides and is made more durable by being put on a continuing and organised basis. This partnership will support the emergence of a ***learning society*** where an individual's daily activities, in and out of the workplace, constitute part of a learning process.

69 Partnership implies an equal and open relationship where a fair value is set on the services given by both sides. It must also recognise the differences between the prime functions of the parties. The definition of the nature, extent and obligations of such partnerships calls for a consistency of approach both from higher education institutions, from industry and from worker representatives. This would also require clear policies from national and regional authorities who provide the legal and financial framework for higher education. ***In particular, the staffing structures and financial management within higher education institutions must be flexible enough to handle the activities which arise from partnerships and their***

consequences for personnel and for financial procedures. Institutions must also be empowered to invest in the preparatory work which is necessary to support the development of partnerships, particularly at the transnational level.

70 Higher education has done much to support the research and development function in industry by the establishment of liaison and arrangements for technology transfer and scientific advice. The training requirements have not, however, been equally well catered for. One of the reasons for this is that companies frequently require ***a total training provision*** going from top to bottom of the company and this cannot be supplied by a single institution. Also employees cannot always be released in a regular manner from work responsibilities and therefore a more flexible training arrangement is required. ***To meet the training needs of industry higher education institutions will have to work together with other institutions and training agencies and develop the systems necessary for flexible delivery***. The general and pervasive evolutions in skills requirements demonstrate how single institutions must collaborate with other types and levels of training organisations in order to anticipate and meet changing patterns of training demand. To that extent, higher education institutions need to ensure that they are situated fully within the process and infrastructure for determining and responding to regional skills requirements.

71 In the European Community context cooperation between higher education and economic life has been fostered in the first instance through research and development programmes, but in recent years and more explicitly through the COMETT programme. The formation of University Enterprise Training Partnerships (UETPs) under this programme has provided an important impetus at regional and Member State levels to continuing training, training and manpower needs analysis and student placements. Their work in continuing training will be enhanced by the complementary initiatives now being launched under the FORCE programme. ***The UETPs must be strengthened to support a much wider involvement with industry on a systematic basis and the concepts underlying partnership must become more central to the strategies of top management in firms and of top administration in higher education***. The Commission intends to encourage an analysis by top management from both the industrial and higher education sides of existing UETPs as to how they can become simultaneously more wide ranging and more strategically involved in participating institutions. The analysis should include an examination of how to simplify the access of industry, especially small industry, to higher education services. It is necessary to encourage and promote partnerships and networks at the transnational level and to stimulate and disseminate good practice in regionally and sectorally based relationships. ***The Commission should ensure that the different programmes interfacing higher education and industry are appropriately coordinated in order to achieve coherence of objectives, smooth delivery, maximum impact and ease of access, especially by SMEs. An extended role for UETPs as a means of achieving such coherence and of establishing partnerships between higher education and industry on a more comprehensive basis should be seriously considered***.

72 The UETPs have the potential for being significant mechanisms in other European programmes. Delivery of services in areas such as small firms development (Euro Information Centres) and regional technology transfer (SPRINT) can be enhanced by joint efforts. The UETPs could also provide a support role in the research and development area, strengthening the framework for joint higher education/industry projects and ensuring the dissemination and exploitation of results. There is considerable scope for developing more concerted approaches as between the research and development framework programme and training measures at the more advanced levels in the areas of training researchers (as, for example, within the specific programme Human Capital and Mobility) and in the training of company personnel within specific strategic sectors in the management and application of the results of RTD initiatives.

73 ***Improving the context for cooperation is one of the central tasks in which higher education will be involved over the next decade***. This task is one which will require action on the part of the higher education institutions and authorities and corresponding actions by companies and their representative organisations. The support of the social partners, of the Member States and of the European Community will also be required.

74 The higher education institutions should adopt cooperation with industry as a fundamental part of their mission and should be ready to adapt their structures of courses and qualifications and the methods of course delivery to support this cooperation. It should be manifest in areas such as continuing training, research and development, advisory and consultancy services and should also be reflected in student and staff exchanges and in the structures for the flow of information from higher education to industry and ***vice versa***. The conditions of engagement of higher education staff should encourage and reward collaborative efforts with industry. The higher education institutions should examine the scope for involving industrialists and worker representatives to a greater extent in their work through participation in Councils, Committees and advisory structures. They should develop appropriate structures for interaction with industry at a business level which can handle the external market for training and other higher education services.

75 ***The companies, for their part, should formulate through their representative bodies, positive policies for developing partnership with higher education***. They should have an organised interface with higher education at all levels in order to promote and facilitate dialogue. All companies should have an explicit education and training strategy linked to staff development within the company. They should be prepared to play their part in training for the overall good of industry and in the interest of stabilising the labour market as well as in their own immediate interests. Companies must also accept (as is the case for a number of Community RTD projects and consortia) that involvement in consortia can lead to transfers of know-how as between companies, but that this does not threaten their position.

76 ***Member States should provide for the framework for cooperation in their higher education policies and also adopt fiscal policies which would stimulate investment by companies in training and research and development in partnership with higher education.***

77 The improved context for cooperation and the specific actions flowing from it would reinforce other approaches advocated in this memorandum. In particular they would support the approaches adopted to continuing and distance education and provide impetus to higher education to effect reforms in the structures of courses and qualifications. Exchanges of information between industry and higher education would give greater relevance to planning processes at regional, national and Community levels. The partnerships would also strengthen higher education/industry collaboration in RTD.

Continuing Education

78 As stated previously in this memorandum (paragraphs 9-15) the increasing pace of technological development and its application to all aspects of economic life have a number of important consequences for the labour force if Europe is to maintain global competitiveness and achieve the economic progress that will guarantee a good life to all citizens. The labour market relies heavily on the recruitment of young qualified manpower in order to achieve technological renewal. The faster the pace of technological change and the more rapidly existing skills and knowledge go out of date, the less possible it becomes to rely so heavily on this source. Moreover the decline in the numbers of young people in the Member States

and in the Community as a whole, together with the need to raise appreciably their level of skills and knowledge before they enter the labour market, reduces this possibility even more.

79 In these circumstances European industry must seek technological renewal also from other sources. One such source is the existing labour force, more than 80% of which will still be active at the end of the century. Retraining of the existing labour force has always been necessary as technology brought about changes in the workplace. ***In the light of more rapid technological advance this retraining takes on a new urgency and a need for greater structuring and more widespread availability***, not only because skills and knowledge will have to be updated more frequently, but also because technological change is making industrial and economic activity more knowledge based and ***this is necessitating also an upgrading of the qualifications of the existing workforce***. An overall step improvement is required in skills, knowledge and qualifications.

80 A further means of meeting labour market needs is to increase the rate of participation in the labour market. This would involve ***inter alia*** the provision of retraining on a significant scale for unemployed and redundant workers and also the provision of opportunities for non-participants, particularly mature females whose participation rate is low, to acquire qualifications of a level and type needed by the market. Active policies of encouragement and guidance must be pursued in relation to having these groups avail themselves of higher education opportunities.

81 ***All of these factors raise the area of continuing education and training to a new prominence and pose for all the actors concerned special challenges in providing for the updating and upgrading of the workforce. These challenges imply a shift in policy terms in the balance of attention, investment and organisation as between initial and continuing education with an increased importance being attached to the latter***. Initial education will also need to incorporate the idea of continuous learning and adaptation through future learning and training possibilities. Social partners will need to agree on the importance of continuing education and training for the enterprise and for employment and must be prepared to structure work in such a way as to facilitate and encourage participation in continuing education by the workforce. Individuals, too, will have to become more conscious of the need to invest part of their working and leisure time in learning and in a more structured way than hitherto. In this they will need to be supported by positive policies at both Member State and institutional level. These measures generally would bring about ***a blurring of the boundaries between initial and continuing education, where recurrent education throughout working life and beyond would become much more the norm in a learning society***. Higher education has a particular role to play in meeting these challenges as ***the movement in continuing education is towards higher level knowledge and skills*** and the dissemination of the results of research.

82 Continuing education forms part of adult education in which higher education institutions have long been recognised as having a role and a responsibility. The extent to which they exercise this role varies considerably between Member States. In some countries, even where higher education institutions had legally defined responsibilities in the field of adult education, little or no provision was made due to the pressure of coping with increasing numbers of school leavers. There are differences too as between institutions of higher education, with those which had their origins in technical and vocational education being more involved in continuing education. As the status of these institutions grew , however, their energies and resources were also increasingly directed to providing full-time courses for school leavers and their involvement in continuing education declined as a proportion of their activities. The inadequacy of the response of higher education institutions to continuing education is highlighted by the growth in recent years of corporate and private training provision, much

of which parallels the work being done in higher education institutions with full-time students.

83 ***The firm commitment of higher education institutions to continuing education is necessary in order to secure adequate standards of continuing education, properly linked to initial training and interactive with research and with the latest developments in the disciplines concerned***. The extensive network of higher education institutions is the guarantee that continuing education could be available on a sufficiently widespread basis to meet the requirements of economic life and to interact with small and medium sized enterprises which would not have the capacity to mobilise their own training. It should be noted, however, that continuing education needs to be developed in partnership with economic life and that there will remain certain aspects of training which are best carried out within enterprises, but which, nevertheless, must form part of an overall structure of continuing education and training.

84 There have been developments in recent years aimed at easing the entry of mature students to higher education and at providing postgraduate courses for graduates who have had experience in the labour force. These developments are welcome as a step towards bringing continuing education into the mainstream of higher education activity and making it more central to the concerns of the institutions, a process which is vital if the education and training needs of the Community and the Member States in the coming decades are to be met. ***The development of this mainstreaming and the siting of continuing education in a more prominent position among the priorities of higher education institutions depends on the establishment of appropriate support policies at institutional and at national level***. Partnership with economic life would imply a role for its representatives in the development and furthering of these policies.

85 At the institutional level there is first of all the task of ***creating awareness of continuing education*** and responsiveness to the ideas underlying it among academic and administrative staff. There follows from such an awareness the process of convincing students of the ***need for frequent renewal*** and for assuring them of the support of their institutions in keeping abreast of developments in their professions and disciplines. There is a necessity to strengthen existing structures, or to create new structures which have the ***capability of analysing and assessing continuing education needs in enterprises, in the professions and among the general public***. This calls for new kinds of association and alignment of further and adult education with adult advisory and guidance services. The development and marketing of suitable training "packages" to meet client needs and the delivery of such "packages" will require going outside of the confines of the institution and working in cooperation with other institutions, agencies and international networks including thematic networks, in order to supply the full training requirements of clients. The structures must be such as to facilitate this type of approach. There must be ***a clarity about the policies of financing and provision*** within which these structures operate and about the extent to which they can draw on resources within the institutions. The provision of continuing education must be encouraged by ***attaching recognition to activity in this field*** and rewarding it on a par with other activities within the institution.

86 The mainstreaming of continuing education raises a number of essential academic issues which must be resolved. Foremost among these is the question of ***access*** and the basis on which continuing education students and mature students generally are admitted to higher education courses. The positive policies which are to be observed in some institutions and which give credit for maturity and for knowledge and experience gained in the labour market would need to be adopted on a wider scale, as would the provision of preparatory courses which supply the basic preparation relevant to embarking on a particular course of higher education. ***The development of suitable structures of qualifications for continuing education students is also***

an urgent necessity. The award of academic qualifications to continuing education students is essential in order to ensure wider recognition of their studies both on a national and European scale and to increase the prestige of continuing education itself. Any such structure would have to comprehend not only work undertaken within the institution, but also work of a training and experiential nature completed within the enterprise and work which would be conducted and accredited by other agencies involved in the delivery of the continuing education "package". ***Flexible delivery of courses*** to suit client needs would call for new pedagogic developments and for the application of distance learning methods, including the use of modern communications techniques. ***Modular structures of studies with the award of credits for units of study completed*** would appear well suited to the range and variety involved and to the needs of continuing education students. Many of these developments would require special training for adult educators, both in the institutions and in the workplace.

87 At national level there is a need for the creation of a better structure for continuing education and training, ***for the coordination of provision and for the compatibility of policies as between employment and educational agencies***. Continuing education is an important element of regional development strategies and this should be reflected in policies of provision. Practically all institutions of higher education would need start-up support in the development of continuing education activities. The extent to which the burden of cost of continuing education should fall on employers, individuals, or on public sources is a matter to be determined in the light of employment, social and general education policies for the regions and for the Member States. In the adoption of such policies ***the social role of continuing education should not be overlooked***. Not only does it help equalise educational opportunities between the generations, but it can also be instrumental in reducing other societal inequalities. The public service function of continuing education in raising the cultural level of society should also be supported and its potential contribution to developing European "identity", by providing knowledge about Europe and its people and its cultural diversity should be exploited.

88 The importance of continuing education and training at Community level is reflected in the support given through programmes such as COMETT, FORCE, EUROTECNET and Human Capital and Mobility and in further measures with regard to the right to continuing training of workers in public and private institutions proposed in its programme of future activities. In furthering the development of continuing education in higher education the Commission will be examining ways of stimulating good practice and disseminating knowledge of it by:

- ***analysing the evolution of skill needs and qualifications, as well as the supply of education and training to meet them;***
- ***supporting innovative models at institutional level in their developmental stages;***
- ***supporting pilot projects aimed at catering for SME's, for newly developing businesses and for enterprises undergoing major transformation due to the application of new technology;***
- ***developing through Community programmes such as COMETT, FORCE and EUROTECNET, additional continuing education and training networks at European level, especially in specific economic and training sectors;***
- ***supporting, through ERASMUS, innovative qualification/credit transfer developments at European level;***
- ***supporting the development of flexible delivery systems at European level, specifically aimed at SME's;***
- ***supporting at European level, innovative developments in the training of trainers;***
- ***supporting and developing a scheme for training researchers, especially at post-doctoral level, as proposed in the RTD programme Human Capital and Mobility.***

Open and Distance Education

89 Distance education has a distinctive contribution to make to the total context of education and training in Europe. Its extraordinary potential derives from the freedom which it enjoys from constraints of time and place, giving it an extensive ***flexibility of application for use on its own or in conjunction with other learning systems***. It gains further flexibility from its careful pedagogic structuring into units of study which can be assembled into coherent courses and which are often related to credit award systems. There are, theoretically, no limits to its application and it can be used by individuals widely dispersed as well as by concentrated groups. It can reach across the boundaries of regions, countries and continents. It is a service which can virtually be called up on demand, making minimum intrusion into the demands of the workplace, capable of being fitted into slack time or leisure time.

90 Modern technology greatly facilitates distance education in certain aspects of its delivery and in the important area of student interaction and work is continuing, in particular, in the DELTA programme on the potential of developments in telecommunications and informatics for distance learning. Current technology is, however, adequate to sustain major advances in its use and application. The employment of multimedia systems in conjunction with distance learning have brought to it a standard of illustration and insight into the nature of things which is rarely achieved in conventional teaching.

91 The interest of the Community in distance education arises from a recognition of the contribution which it can make to the achievement of the objectives of education and training policies within Member States and in the Community as a whole and the extent to which this contribution can be facilitated and enhanced by cooperative action. ***Distance education lends itself to cooperative action by being, in many respects, independent of national boundaries, by being dependent on economies of scale to keep development costs under control and by gaining so appreciably in quality and range from a sharing of expertise between institutions, networks and Member States***. Industry too, both as a producer and consumer of distance education products, has an important role to play in this cooperation.

92 Distance education is an instrument or a tool which can be utilised within many existing Community programmes and therefore any Community initiatives in this field are seen as complementing and reinforcing these programmes. This is particularly so in the case of the COMETT programme where initiatives have already been taken in supporting distance education organisations and agencies. Discussions have been taking place with a view to siting a distance education component within the TEMPUS programme and its potential for contributing to ERASMUS, LINGUA and FORCE is being considered within the Commission.

93 In the area of higher education and advanced training distance education is seen as having an important role primarily in the following areas:

- ***extending opportunities for participation in higher education and helping to equalise educational opportunity;***
- ***reinforcing the educational infrastructure of regions by extending the range of education and training available in institutions and directly to individuals;***
- ***improving the quality of higher education by enabling external high level teaching expertise to be incorporated into programmes and by developing multimedia competence in higher education institutions;***
- ***strengthening transnational partnerships through the sharing of teachers and of course material;***

- ***supplying continuing education and advanced training to the working population and especially to SMEs on a flexible basis;***
- ***delivering advanced training and disseminating the results of research on a transnational basis;***
- ***supplying in-service training to teachers on a regional, national and transnational basis;***
- ***providing technical assistance to third countries including, where necessary, the mass re-education of the working population;***
- ***contributing to the European dimension in education through providing teaching about European cultures and peoples and supporting the teaching of European languages;***
- ***teaching about the European Community, its laws, institutions and policies.***

94 Distance education has developed independently in Member States where widely different levels have been attained with respect to size and sophistication. Its development has been principally in the university sector. Collaboration with and integration into the regular university systems differ considerably in the Member States which have established open or distance teaching universities. In most cases "conventional" universities are providing authors for course development and are involved in student support facilities. However, ***closer integration and relationship between distance education and the total structure of post-compulsory education and training would appear essential to future developments***.

95 Distance education should not be confined to the more general studies type of university course and qualification, but ***should range over a wide spectrum of provision by level and type***. It should service not only general education, but also the wider range of vocationally related studies, particularly in the areas of science, technology and business. It should ***maintain a structure of a modular type*** through which studies both at technician and graduate level could be completed and through which the needs of continuing education could be served. In doing this it should be drawing much nearer to the industrial and commercial environment.

96 Students should be able to move freely as between distance education and institutional modes of study and qualifications gained through distance learning should carry the same status and recognition as those awarded for corresponding studies carried out in attendance at higher education institutions. Distance education should be seen as supplementing and complementing existing higher education and advanced training structures to enable them to cope with the demands of the coming decades. To enable distance education to play such a role will require an openness at institutional level and positive policies in Member States to support the institutions in their efforts and to create the structures which will provide the necessary coordination and standing for distance education initiatives.

97 There are many obstacles to be overcome before the benefits of European cooperation can be fully realised in the area of distance education. High among these are ***lack of standardisation and the cost associated with the development of multimedia products***. The rate of obsolescence of these products is also an important issue. Experience in the use of packages and systems is limited both from the point of view of teaching and learning and ***comparative studies could make a valuable input as could the exchange of experience in the training of "package" designers***. The attractiveness and user friendliness of "packages" and course delivery systems would also need to be improved.

98 ***The participation of transnational partnerships and networks in distance education will need positive stimulus within existing Community programmes***. The Commission has just

completed a comparative report on "Open and Distance Higher Education in the European Community" (SEC(91)897 final) and a memorandum (COM (91) 388) in which the issues relating to distance education and its applications are discussed in detail.

The European Community Dimension

Student Mobility within the Community

99 With the completion of the Internal Market the post-1992 Community will require a far greater supply of graduates than hitherto who have had ***first-hand experience of studying, living and working in another Community country***, who are proficient in a number of Community languages, who have begun to understand and appreciate the culture and mentality of other Community countries and for whom the whole of Europe as opposed to the single nation state is a natural area of activity. Mobility is one of the most effective instruments in producing graduates of this kind.

100 ***Possibilities for mobility will need to embrace a variety of different patterns***, varying from students who merely wish to spend a brief period abroad for the purposes of conducting a particular project, course unit or part of a dissertation or gaining a measure of planned industrial experience, to those who for family, career or other reasons would like to receive their entire higher education or to study towards a further qualification in another Member State. Much mobility in the future will be organized within the framework of the growing multiplicity of inter-university networks and university-enterprise partnerships of various kinds; but provision must also be made for the individual students who, for a whole variety of reasons, wish to take some or all of their higher education courses elsewhere in the Community.

101 Despite the undoubted impact of the newly created Community-level programmes such as ERASMUS, COMETT and LINGUA, as well as the various schemes of similar orientation sponsored by the Member States themselves, ***the level of student mobility within the Community is still very low, embracing at the most optimistic estimate 4% of the entire student population***. At the time of launching the ERASMUS programme, both ***the Commission and the European Parliament stated the policy objective in quantitative terms that by 1992, 10% of all Community students should have the opportunity of spending an integrated period of study in another Member State***. This objective remains valid as the minimum required to meet the future needs of the Community. It will not, however, be achieved by the target date and can only be regarded as an attainable objective for the mid-1990's subject to measures to strengthen policy in this area being taken without delay.

102 A more comprehensive policy for student mobility within the Community requires a two-pronged approach. Firstly, it will be necessary to ***dismantle barriers*** which at present inhibit the development of stronger flows of mobile students. Secondly, it will be vital to ***enhance incentives*** in the form of support programmes of various kinds.

103 To be effective, this two-pronged policy must be characterised by the closest possible cohesion between the Community and the Member States, including the local and regional authorities within the latter, in order to maximize the impact of policy measures and to make the most efficient use of the resources available. Furthermore, careful attention must be given to monitoring the increasing mobility flows, in order to ensure their harmonious development across the Community as a whole, and to avoid a situation in which large imbalances in student flows in "export/import" terms could become an undue burden on certain Member

States. In due course, the desirability of making some form of compensatory adjustments in cases such as these might well be considered, as well as efforts to promote the development of higher education and advanced training in the weaker regions.

Dismantling barriers

104 The principal ***barriers*** standing in the way of more widespread student mobility in the Community, and which need to be dismantled, may be identified as follows:

- ***admission restrictions***: where access to certain courses of study is limited, the particular situation of students from EC countries will need to be taken into account and appropriate provision made to ensure reasonable access opportunities, on the basis of genuine non-discrimination;

- ***language problems***: absence of adequate competence in the languages spoken in other Community countries is a major deterrent to student mobility. ***It is the view of the Commission that competence in at least one other Community language should be a compulsory component of normal higher education access qualifications***. Higher education institutions should increase substantially the range of courses involving the study of a foreign language in combination with another discipline and improve the provision of language-learning opportunities for the generality of students and staff. Language proficiency must not be used as a means of deterring potentially mobile students, particularly those who have a qualification in the language concerned in the final school examination in their own country. Extra language support should be provided where required;

- ***recognition problems***: easy movement from one country of the Community to another is still impeded both by a lack of clarity and by real difficulties concerning the recognition of qualifications and previous study;

- ***practical and administrative problems***: the increased flows of students throughout the Community will inevitably give rise to many practical and administrative problems, which will require attention at various levels. One particular problem requiring urgent solution is that of student accommodation;

- ***financial problems***: the capacity to be mobile is clearly influenced by the consideration of cost to the individual. It is important to ensure that less well off students are not excluded from study abroad programmes for financial reasons. In this context, too, total transferability of grants/loans/scholarships etc. for student support throughout the Community should be a key objective. ***It is also proposed to examine the feasibility of introducing a system of Euro-Loans, which would be available to students at favourable interest rates for the purpose of facilitating study abroad within the Community***. The particular situation of Member States whose institutions rely heavily on tuition fees will need to be carefully analysed;

- ***inadequate information***: there is still a lack of readily accessible information for students on study possibilities in other Member States. This will necessitate further improvements in the production and dissemination of appropriate documentation (such as the EC Student Handbook) and other, non-textual forms of information, and the Commission also proposes to examine the longer-term feasibility of a data base (or interlinked system of data bases) of course offerings at higher education institutions across the Community.

105 Many of the foregoing barriers are also of relevance to the transnational mobility of students undertaking a placement in industry which is an important action of the COMETT programme. It will be important, therefore, in addressing these problems, to take full account of the placement student who may additionally face difficulties regarding continued tenure of student support under national schemes, social security and insurance and employment and taxation status.

Enhancing Incentives: Action Programmes for Mobility

106 Even if the barriers to mobility were removed, this would not be enough to generate the development of student flows between Community countries on the scale required. For this purpose, ***specific action programmes*** will continue to be necessary. Alongside the student-mobility activities supported by the COMETT and LINGUA programmes in their respective specialised areas, the ERASMUS programme will remain the principal vehicle for promoting student mobility throughout the Community.

107 The support given by ERASMUS and COMETT for the creation of partnerships across national boundaries has already resulted in inter-university and university/industry cooperation becoming more a feature of the development strategies of higher education institutions. It is also helping to create an important framework for innovation in higher education. These effects will be further enhanced through the development of the LINGUA programme.

108 However, in order for the programmes to achieve their full potential, ***the funds available will need to be substantially increased and new forms of integrated partnership sought between the Community and the Member States*** for the purpose of ensuring maximisation of complementarity between programme funds as such and additional funds from Member States. The target of 10% of students having an integrated period of study abroad is intended to be met by contributions from all sources. A stronger dialogue will also be sought with the private sector, in order to monitor the effectiveness of the programmes in producing graduates with appropriate employment profiles and also with a view to seeking private sponsorship such as complementary scholarships or support for partnerships in specific sectors.

109 The parameters used for calculating the student grant monies to be made available to ERASMUS students from the different Member States will be reviewed, with a view to enhancing ***equality of treatment across the Community*** and to ensuring that the ***most needy students*** are provided with the financial support necessary for facilitating their full participation in the programme.

110 Within the overall budget available for student grants within ERASMUS, the Commission will consider the desirability of reserving a certain proportion of the total funds for more targeted support of ***full-course scholarships for students seeking to obtain a further qualification in another Member State, possibly linked to a scheme of co-funded teaching assistantships***.

111 With respect to student mobility placements in industry, the network of COMETT university-enterprise training partnerships (UETPs) has, since 1988, emerged as ***a major placement service*** both to companies and to higher education. This is reflected in the increased demand originating from the companies themselves for high quality placements. ***The longer term potential and viability of this network will need to be examined after 1993 when the initial funding for most UETPs will cease***. The basis for continued funding of a service which cultivates relations between higher education and industry on a transnational basis and supports European industry in regard to its needs for well qualified Europe-oriented graduates should be carefully considered.

Cooperation between Institutions at European level

112 However successful the policies of enhancing mobility it must be assumed that it will always be a minority of students who eventually go abroad. Policies must therefore be developed to ensure that the great majority of students who will not be mobile in the geographical sense, may nonetheless partake of the European experience which will be vital for their future lives and careers.

113 Such policies for "***bringing Europe to the students***" will involve a concerted effort to bring about a fundamental change in the attitude of higher education institutions towards the European dimension of their work, only one - albeit important - component of which is the promotion of greater student mobility as such. In the post-1992 Community, commitment to a European dimension in teaching and research must become a basic element in institutions' academic planning and strategies, reflected in ***greatly enhanced cooperative activities*** across the whole range of academic disciplines and in the existence of ***institutional "European" policies*** covering all aspects of academic life.

114 This will need to find expression first and foremost in an institutional commitment to ***exchanges and cooperation between teaching staff from higher education institutions in different Member States*** - an aspect of the ERASMUS programme which has so far remained comparatively under-developed due to the overall lack of funds, but which has enormous potential. It can also involve staff exchanges with industry on a transnational basis, an aspect of the COMETT programme which has remained modest in scale. Such exchanges can be a cost-effective means of providing the 90% plus of students who do not themselves become mobile, with a significant European element in their education. They are part of the strategy for the pooling of intellectual resources throughout the Community in order to improve the quality of education and training as a central factor in maintaining the long-term competitiveness of the Community in the world market. For RTD activities this is the central objective of the programme Human Capital and Mobility.

115 Contacts between teaching staff and with industry play an essential catalytic role in stimulating increased student mobility by establishing mutual trust and confidence in academic levels and methodologies. Faculty exchange and cooperation should thus become as much a "mainstream" activity of institutions as the exchange of students, and should relate not only to cooperation in research but also, and crucially, to ***cooperation in teaching***. In this respect, systematic links could be established, whenever possible, between ICPs and the networks foreseen by the Human Capital and Mobility programme. Visiting staff will in many cases be providing substantial and integrated contributions to the teaching and training programmes of the institutions which they visit, but there should also be provision for short-duration, one-off teaching assignments. Support programmes at national and Community level must adapt to the need for swift and flexible response to funding requests in this area of activity, and the volume of funding will need to be substantially enhanced, notably within the ERASMUS and COMETT programmes where it currently accounts for only a small percentage of their overall programme budgets. Administrative obstacles to faculty exchange must be analysed and dismantled and the ***recruitment of teaching staff from other Community countries*** encouraged.

116 In addition to, and in many cases in conjunction with, the enhanced exchange of teaching staff, the need for greater cohesion between the higher education systems in the Member States in the post-1992 era will necessitate far ***closer cooperation than hitherto in the area of curriculum development*** - again an explicit action heading within ERASMUS but one which limited resources have severely curtailed. In many instances, such cooperation will take the

form of cooperation in the development of completely new curricula to the mutual benefit of all partners. In others, the focus will be placed more strongly on the provision of assistance by one institution to another in the development of courses which are just being introduced. It is also crucial that ***institutions regard involvement in European programmes as a positive aspect of the qualifications profile of their teaching staff. Proven commitment to inter-university cooperation should therefore be a universally applied criterion for career advancement***. Administrative staff across a broad range of service functions should also be encouraged to avail themselves of opportunities to visit other EC countries for the purpose of exchanging experience.

117 The combined impact of increased student and staff exchanges, enhanced cooperation in the development of curricula, the joint organisation of intensive seminars, courses and colloquia and many other forms of inter-institutional cooperation which will evolve in post-'92 Europe, will have significant repercussions for the Community's higher education institutions. In administrative terms, the creation of specialised units for handling student (and, to a lesser extent, teaching staff) exchanges has been a marked and increasingly apparent trend since the late 1980's. Founded as an appropriate management response to the newly established Community programmes, these units are nonetheless wider in their remit and have already begun to have a more general impact in promoting the European dimension. Due attention will need to be given to ensuring the most appropriate balance of responsibility between the central and departmental levels within institutions, in order to maximize efficiency while at the same time safeguarding the commitment of the academic staff responsible for the management of specific cooperation activities.

118 Such a comprehensive approach to institutional involvement in Europe will require commitment at all levels within higher education institutions, and will also depend for its success on the availability of adequate resources, both at national and at Community level. But much can be achieved with comparatively limited funds, as a multiplicity of cooperative arrangements within ERASMUS and COMETT have already shown. Of particular significance has been the fact that progress up to now has been based on institutional cooperation and agreement rather than on formal intergovernmental arrangements and this has facilitated the spontaneous emergence of a large and growing number of inter-university networks and consortia as a vehicle for enhancing cooperation either in individual disciplines or across a much broader range of subject areas. In some cases, such partnerships have assumed a formal status of their own, in others they are more informal arrangements based on a very "variable geometry" of needs and orientations from one academic year to the next. In some instances, the networks concerned are operating in a regional context in border areas between two or more Member States, and such "trans-frontier regional cooperation" should be further encouraged in the future. The recent trend in some countries towards the setting up of research schools, where doctoral students do research but also take courses as part of their training, will be monitored at Community level, bearing in mind the role and the requirements of industry.

Europe in the Curricula

119 As the impact of increasing European cohesion begins to make itself felt in the wake of the Single Market, there will be a corresponding need for persons engaged in an ever-expanding range of professional activities to be more fully aware of the European Community context of their work. Closer contacts between the citizens of the Community will give rise to increased interest in and demand for enhanced knowledge about the culture and society of other Member States. These forces will in turn generate the need for paying far greater attention than hitherto to the European dimension of curricula - at higher education level as in all other educational sectors.

120 In the past, these concerns have been mainly limited to disciplines in which European Community matters are an explicit focus of attention, such as political science, economics and law. The very positive response to the Community's Jean Monnet Action has eloquently demonstrated the need to consolidate and expand support for activities in this area still further, through such methods as the establishment of chairs and other teaching posts, the development of courses and course-modules, and the stimulation of research on aspects of European Community integration. In the future, ***the European Community dimension will need to play a role in a far wider range of subject fields***.

The Central Importance of Language

121 Just as science and technology have come to pervade every aspect of human living, so the question of languages pervades all the ambitions, intentions and policies of the European Community. Its importance is expressed cryptically, but comprehensively in the recital to the Council's decision on the LINGUA programme (89/489/EEC) which states: "***Whereas greater foreign language competence will enable citizens to reap the benefit of completion of the Internal Market and will enhance understanding and solidarity between the peoples which go to make up the Community, while preserving the linguistic diversity and cultural wealth of Europe***." It is in deference to this importance that the question of languages is discussed in this chapter as well as being interwoven with many of the other issues which are considered elsewhere in this paper.

122 Language is an expression of the identity of people. It is the key to understanding their culture, customs and aspirations. Language is a socially cohesive force in a community though it may and has become a politically divisive one on occasions. It is a storehouse for the wealth of literature, history and folklore. Language as communication is necessary for getting business of all kinds done. ***Language competence is necessary to support mobility, economic and administrative interaction and cooperation in practically every sphere of activity***. There is little doubt but that the conduct of business would be facilitated by having a common language - a ***lingua franca***. The Community chooses, nevertheless, to support a diversity of languages and cultures, regarding these as a characteristic of European society which makes it interesting, stimulating, civilising and challenging.

123 The challenge then, is how to evolve from this diversity a way of completing business; of interacting economically, socially and politically across the boundaries of Member States and across language and cultural barriers; of sharing the wealth of European culture of which its languages are vehicles; of developing a European identity, side by side with national and regional affiliations which are often language based. The Commission would see this challenge being met by the strengthening and implementation of policies which would have the effect of ***extending and enhancing the learning of Community languages throughout the Member States***. It was in the furtherance of such policies that it proposed and the Council adopted the LINGUA programme in 1989. This programme, however, and the other Community programmes such as ERASMUS, COMETT etc., which justify the acquisition of languages as part of their activity, do not set any policy targets in relation to language learning and are designed to support the efforts of Member States in the teaching of foreign Community languages. The importance of languages to the future of the Community would justify the setting of targets in this area. ***It would appear reasonable that all Community citizens should have the opportunity to acquire communicative competence in at least one Community language in addition to their mother-tongue and that substantial portions of the population should be expected to acquire a knowledge of two Community foreign languages***.

124 The higher education institutions of Europe have a central role to play in helping to achieve

objectives in this area. Not only are they responsible for the initial training of teachers and language specialists but also for much of their in-service training. In this position, and using their research capacity towards the refinement of curricular objectives and teaching methods, they can provide the leadership and the stimulus necessary to obtain a substantial step forward in the level of language teaching in the schools. They will be supported in this work to an increasing degree by the LINGUA programme which had a modest beginning in 1990.

125 This memorandum, however, is focussed more on the wider responsibilities of higher education institutions in the languages area, on languages for the generality of students and on the necessity for comprehensive institutional policies with regard to language provision. ***Perhaps the first element in such a policy is the cultivation of positive attitudes to language learning among the students and staff in all disciplines and the encouragement of a wide range of language usage in the academic and social life of the institution. It is not unreasonable to expect higher education institutions to present a multi-lingual voice to their clientele and to the general public.***

126 Elsewhere in this memorandum it is suggested that school-leavers enrolling in higher education institutions be required to have a school-leaving qualification in at least one Community foreign language. Whether or not such a requirement is laid down, ***it is essential that students be supported in maintaining and extending their language skills***. This would involve, at various levels, the provision of language courses accompanying other disciplines, notably in the scientific, technological and business skills areas and the provision of supplementary learning, including self-instruction, facilities for students. One of the most successful ways of maintaining and consolidating a language is by using it. Where possible, portions of courses should be taught through the medium of Community foreign languages.

127 Language can also become a focus for social and intellectual life within an institution. Support for language societies, designation of language areas or language centres, celebration of language days and language festivals, the promotion of cultural and social activities of all kinds in Community foreign languages, all of these can help to sharpen this focus. It would be expected, too, that higher education institutions should have a range of topical materials, newspapers, magazines, books, videos etc. over a reasonably representative range of languages available for perusal by interested students and staff.

128 A strong incentive for maintaining or acquiring language competence is the prospect of spending some time in the country where the language is spoken as a vernacular. Higher education institutions could harness this motivation not only in connection with organised mobility schemes associated with Community programmes such as ERASMUS and COMETT, but also in association with other student travel opportunities such as those arising from vacation work or participation in social interaction with students from other Member States. An atmosphere supportive to multilingualism is created by having a discernible presence of students from other Member States either as whole-time students, or completing study abroad periods.

129 An institutional policy towards languages has to find its strength and continuity in the staff of the institution. For that reason, ***opportunities for maintaining and learning languages, including study abroad opportunities, should also be available to staff at all levels. Language competence and European involvement should feature in assessing staff at both academic and administrative level for appointment and promotion***. The language and cultural profile of the institution would be widened by having a proportion of staff who are nationals of other Member States. ***Institutions should be open to the appointment of nationals from other Member States to academic and administrative posts***. Their numbers can be extended through staff exchanges, sabbaticals and recruitment to particular projects.

Post-graduate students from other Member States could be engaged also as teaching assistants. All of these factors would combine to strengthen foreign language presence and foreign language usage on the campus and extend the opportunities for staff and students to have first-hand contact with the languages and cultures of other Member States.

130 These movements towards a multi-lingual and multi-cultural ethos can only occur with the support of ***language departments which are concerned with communicative competence as well as with the literary and cultural aspects of language***. There has been a noticeable movement in recent years towards having communication skills underpin other language studies. Also the experience of providing specialised language to meet the needs of particular professions has been greatly extended. Both of these aspects of language work will have to be intensified not only to meet the needs of whole-time students but also to serve the growing requirements of the workforce in continuing education. This latter obligation will make demands also for flexible delivery, sometimes through part-time courses, sometimes through intensive and immersion courses and sometimes through distance education. ***Meeting these challenges will require a strengthening of language departments and an extension of the repertoire of pedagogic skills***.

131 Institutional policies must also take account of the range of languages on offer and in particular of the lesser-used and lesser-taught languages. Service to these languages should be available in all major centres of higher education, if necessary in cooperation with other institutions by the sharing of facilities and courses and by joint appointments.

132 Actions of the foregoing kind which will be supported, wherever possible, within the framework of existing Community programmes, would go a long way towards creating ***the multi-lingual atmosphere which must characterise the European higher education institutions of the 1990's***.

The Training of Teachers

133 The inclusion of a European Community dimension in the curriculum of pupils both at elementary and secondary levels of education is necessary so that they understand the political, economic, cultural and social realities in which they are growing to adulthood and in which they will come to exercise themselves as Community citizens. ***It is most important that this dimension should rest firmly on a foundation of European experience and that teachers who are charged with devising, interpreting and ultimately teaching such a dimension should be able to draw on such experience***. The acquisition of European experience by teachers would also be supportive of the more widespread understanding of the different systems of education and of their aims and philosophies and would help to define the areas of common approach and of possible convergence, which would facilitate catering for the education of a more mobile European population. European experience would also be a factor in encouraging the mobility of teachers themselves and thereby enhancing the availability of a European dimension and extending the range of knowledge, skills and experience available to the European education systems.

134 Teacher education is organised in different ways throughout the European Community, reflecting the historic circumstances, cultures and perceived needs of the elementary and secondary education systems in the Member States. Courses of teacher education can vary in duration and structure and can take place in independent teacher training institutions, in association with other higher education institutions, principally universities, or as an integral part of the functions of such institutions. There is also a broad division of teacher education into concurrent training, where academic and professional requirements are developed simultaneously throughout the entire course, and consecutive training, where intending teachers

are first required to take a more general higher education qualification and then receive their professional credentials as a result of a post-graduate course.

135 Opportunities to spend a period of study abroad are at present available to potential future teachers in the context of the ERASMUS programme and specifically, in the case of future language teachers, through the LINGUA programme. The latter programme also provides in-service opportunities for spending periods abroad in the case of practicing teachers. There are also extensive bilateral arrangements for language teachers, particularly of the more widely spoken languages of the Community.

136 There are a number of factors which limit the ERASMUS programme as a vehicle for providing European experience for teachers. Student teachers on short duration courses can, at best, avail themselves of a short study abroad period. Also it is not easy within the limits of a general scheme and a relatively short stay abroad to arrange for the practical experience in schools which would be of particular value to future teachers. In the case of teachers whose professional training is of the consecutive variety, any study abroad period is much more likely to be achieved in the context of their general academic studies rather than in their postgraduate professional studies which tend to be intensive and of short duration. ***The overall result is that student teachers are not well catered for within the ERASMUS scheme as the more professional aspects of their studies cannot be adequately reflected in their study abroad arrangements. Moreover, there is no support within ERASMUS for in-service periods for teachers in general***, such as those envisaged for language teachers in the LINGUA programme.

137 The limitations of existing study abroad programmes insofar as they apply to present and future teachers in areas other than Community languages would warrant a serious review of the provisions in this case. Exceptional treatment of the teaching profession would be justified not only by the anomalies in its training structure, but also by the importance of the European dimension in education, by the extent to which teachers are multipliers of knowledge and experience gained and by the significant contribution which can be made to European understanding and cohesiveness by a more mobile teaching force. Such a review may well pinpoint ***the need for a separate scheme for teachers, or a modification and special priority within an existing programme which would support their initial and continuing training needs in a European context***.

138 As European experience remains an essential feature of the professional education of all teachers, ***it will be necessary to seek ways of providing this experience for all student teachers and, in particular, for those who do not have the opportunity of a study abroad period***. This experience should be such as to enable teachers to properly interpret Europe to their pupils and to provide a European frame of reference for their work in various aspects of the schools' curricula. It should also include a comparative knowledge of the educational systems within the Member States of the Community. This would give teachers a comparative context for the work they do, it would put them in a position to advise pupils whose families may be intending to migrate within the Community and it would also be supportive to mobility among teachers themselves. ***Cooperation between institutions at Member State and Community level, staff exchanges, support for special inservice courses, dissemination of materials in different media, open and distance education, all are ways, in addition to study abroad, through which European experience in teacher education could be strengthened***.

139 Throughout the Member States there has been a growing involvement of higher education institutions of a more comprehensive type, particularly universities, in the academic and professional training of teachers. This involvement can reinforce the professional status and strengthen the morale of teachers, a development which should be supported by the Member

States and by the Community. The broader resources of the higher education institutions in the human, social and behavioural sciences and in the evolving academic and scientific disciplines put them in a position to provide support and guidance to the teaching profession in achieving the renewal that is necessary to prepare young people for life in our advancing society. ***Opportunities for joint action and for sharing knowledge and expertise in the definition and development of curriculum, in the production of curricular materials and in the evolution of new approaches to learning, involving both schools and teacher education institutions, should be encouraged and promoted at both Member State and Community level.***

Recognition of Qualifications and Periods of Study

140 Efforts to boost the mobility of students and teaching staff throughout the Community and to provide the higher education graduates needed for the Single Market in post-1992 Europe, can only succeed if the qualifications and experience which have been obtained in one Member State are given appropriate credit and recognition in the others.

141 Europe as we know it today is characterised by a very wide range of academic structures which have evolved in Member States and regions in response to particular social and political circumstances. These structures are in turn reflected in different approaches to teaching and learning, different orientations of curricular content and sequence, different minimum study periods and so on, even where broadly comparable terminal qualifications are the end result. Differences also exist in the structuring of the academic year, the timing and nature of examinations, the availability of intermediate qualifications and the titles of final degrees. Furthermore, even within Member States there are few clear-cut arrangements for transfer between higher education institutions, especially from one type of institution to another. This in turn has tended to have an inhibiting effect on international academic credit transfer and recognition, though there are indications that the emergence of European-level credit transfer arrangements is beginning to have a significant stimulating effect on credit transfer within individual Member States of the Community.

142 In future, as the numbers of students seeking a "European" education grow, as the children of an increasingly mobile working population within the Community seek access to higher education at various levels of advancement and as graduates seek career opportunities in countries other than their own in ever-expanding numbers, ***there will be a far greater demand than hitherto for quick, flexible and accurate mechanisms for the award of credit for previous academic qualifications and periods of study carried out in other Member States***, be it for the purpose of ***academic recognition***, i.e. in order to facilitate further study towards additional qualifications, or for the purpose of ***professional recognition*** i.e. recognition for employment purposes.

143 These two forms of recognition, hitherto dealt with largely in isolation from one another, seem likely to become increasingly intertwined. Recognition of qualifications for academic purposes will have a facilitating effect on professional recognition and conversely, the increasing incidence of recognition of terminal qualifications for professional purposes will encourage greater flexibility in the recognition of the steps (periods of study and intermediate qualifications) leading to such terminal qualifications.

144 As far as professional recognition is concerned, the recently promulgated Community directive relating to the mutual recognition of qualifications leading to regulated professions and based on a higher education course of at least three years' duration, constitutes a potentially crucial breakthrough towards greater flexibility of approach. It complements the sectoral directives previously adopted for a number of professional sectors, and is about to be augmented by a

further general directive relating to higher education-based qualifications based on courses of less than three years' duration. Further work in this area will continue to be a major priority for the Commission.

145 As regards academic recognition, the Community's main vehicle for innovation is the ERASMUS programme, three components of which are devoted to seeking solutions to this problem area:

- within Action 1 of the programme (European University Network) over 1,500 student mobility programmes are currently being supported (1990-91), involving almost 1,000 higher education institutions in an exchange of over 40,000 eligible students Community-wide. Each of these programmes has developed arrangements for the fullest possible recognition of intermediate qualifications and study periods accomplished in other Member States. In many cases, joint degrees are awarded by participating institutions or students receive awards from several EC countries on completion of their studies;

- substantial progress is already being made with the implementation of the European Community Course Credit Transfer System (ECTS) within Action 3 of ERASMUS, a newly devised mechanism based on mutual trust between participating institutions and providing a means whereby on the basis of credit points accumulated in their chosen places of study, students may spend part of their courses in two or more Member States with full and in many cases automatic credit (the scheme at present covers some 80 institutions in five subject areas, and is to be extended to further institutions shortly). ECTS promises to become a milestone in the quest for more flexible academic recognition on a Community-wide basis, when its pilot phase is completed in 1995;

- underpinning the other initiatives in this field is the EC network of National Academic Recognition Information Centres (NARIC), a system of nationally designated units whose purpose is to provide students, higher education institutions and employers with authoritative information on the value and recognition of educational credentials obtained in other countries. The NARIC network is a vital instrument for solving the recognition problems of the many individual students who wish to move to other Community countries and the importance of the network is therefore likely to grow significantly with the advent of the Internal Market. The Commission will continue to urge Member States to provide for adequate resourcing of the NARICs and to give them a mandate to deal with both academic and professional recognition matters (including the information functions related to the implementation of the EC directives) in order to promote closer cohesion and coherence between the two types of recognition concerned.

146 More work remains to be done on ensuring appropriate certification for all types of study carried out in other Member States, and on the recognition to be awarded for periods carried out on placement in industry as part of a student's overall studies, though considerable advances have recently been made in this area through the medium of the COMETT programme and, to a lesser extent, ERASMUS. Similarly, existing arrangements - conceived almost exclusively for the purpose of dealing with whole-time students - demonstrate considerable shortcomings when it comes to handling the particular problems of recognition in the continuing education sector, with its emerging new relationship between the worlds of study and work. ***The Commission will seek to promote initiatives designed to come to grips with this problem, which will become progressively more acute as the continuing education function of higher education institutions assumes increased proportions. It will also foster***

a standardisation of terminology in the field of recognition generally, examine the desirability and feasibility of arriving at a greater degree of convergence Community-wide in the organisation of the academic year, conduct comparative studies on systems in the different Member States with a view to assessing their comparability, and seek an active dialogue with Member State and academic authorities on desirable improvements in current recognition arrangements.

147 Underlying the Commission's approach to these questions is a ***commitment to the diversity of higher education provision across the Community*** and the conviction that recognition decisions are, in general, most appropriately taken at the level of the individual higher education institution. In order to ensure broad equality of treatment within such a diversified system, the dissemination of information and good practice is of paramount importance.

The International Role of Higher Education

148 In paragraphs 35-39 of this memorandum, the wider relationships of higher education institutions are outlined, together with the enhanced role which they are coming to play in the Community's relationships with other countries and the reasons why they should play such a role. There has always been an extra-European Community dimension in the relationships between higher education institutions. An illustration of the scale of this relationship may be gleaned from the fact that in all Member States (Luxembourg excepted) the percentage of extra-Community foreign students enrolled for full courses of higher education is greater than that of other EC nationals and in some cases many times greater. Evidence of these relationships is also found in the substantial movement of students from Europe to the United States for postgraduate studies. ***While it is vital to the future of the Community that the European dimension in higher education be emphasised and strengthened, this extra-EC dimension is of fundamental importance to an open European Community, deriving strength from cooperation and interaction across the world.*** It is necessary, too, to consider its importance in the overall interests of higher education.

149 In the field of higher education and training ***European expertise is widely recognised and appreciated and this is an asset which can and should be used to support the growing world role of the Community.*** European culture is highly valued throughout the world and the institutions of higher education should be deeply involved in programmes of cultural exchange with extra-Community countries. Europe's global role and the necessity for the European economy to interact with the world economy requires a two-way flow of information and knowledge. ***Europe must not only strengthen its own identity, but it must do so in a political, economic and cultural equilibrium with the rest of the world.***

150 Within the continent of Europe itself, a significant start has been made with the conclusion of agreements with the EFTA countries regarding their involvement in Community programmes. They are already taking part in COMETT and will be participating in ERASMUS from the academic year 1992-93. This increased scope for European cooperation and interchange will be further strengthened by the successful conclusion of the European Economic Area negotiations as well as any future enlargement of the Community through the accession of other states as members.

151 The political and economic changes in Central and Eastern Europe provide new impetus for cooperation in the field of higher education in a still larger European context. In particular the TEMPUS scheme has been specifically designed for the countries of Central and Eastern Europe. It forms part of the overall programme of Community aid for the economic restructuring of these countries. The main goals of the TEMPUS scheme are:

- ***to promote the quality and support the development of the higher education systems;***

- ***to encourage their growing interaction with partners in the European Community through joint projects and mobility.***

152 Since 1991 Poland, Hungary, Czechoslovakia, Yugoslavia Rumania and Bulgaria are the eligible states within the TEMPUS scheme. The programme as decided by the Council of Ministers on 7 May 1990 concentrates on priority subject areas which are of particular importance to the different eligible countries as part of the process of economic and social change and transition to a market economy. ***TEMPUS has the potential to stimulate much more significant levels of cooperation and association and it could be instrumental in promoting much wider all-round relations with Central and Eastern Europe.*** An important feature of the TEMPUS scheme is its openness to the participation of the higher education institutions of the Group of 24* in the scheme, thus giving it the possibility of engendering cooperation practically on a world-wide basis. It is important when further opportunities for cooperation in higher education occur that the will and the means should be there to grasp them and that the institutions should have the active support of the Member States and of the Community in so doing. ***Just as the scale of educational cooperation within the Community is seen as important to the cultivation of European identity, so the enlarged sphere of European cooperation can be seen as contributing to the identification of common interests within the larger European continent.***

153 Higher education has comprised an important component of Community aid to ACP countries. This type of aid now concentrates on the delivery of technical assistance which is also the principal feature of the agreements with regard to cooperation with Latin American, Arab and certain Asian countries. As a result of these programmes many useful inter-institutional links have been formed, including RTD training activities and projects.

154 The wider relationships of higher education institutions with third countries often stem from historical links with Member States and in many cases these relationships have survived the attainment of political independence in the countries concerned. Other relationships rest on connections established through missionary and trading activities. These relationships resulted in support being given to emerging independent institutions in the countries in question through temporary staffing, staff exchanges, joint research and the provision of postgraduate opportunities. They are also reflected in the composition of the enrolments of foreign students in the Member States and in the emergence of particular departments or institutes in Member State institutions for area studies, development studies and for the study of the languages and cultures of foreign countries. The majority of these relationships are exercised at Member State level with little or no Community component.

155 The growing role of the Community in external relations and its responsibilities towards the developing world would indicate a need for an ***overall strengthening of the Community's role in this area which could occur through supplementing Member State schemes within an agreed policy of coordination. It is important, too, that the Community as a whole should benefit from the special expertise concerning third countries and areas which exists in the higher education institutions in particular Member States.*** The Commission, within existing programmes, will encourage cooperation and networking between these specialised departments and institutes and facilitate exchanges which would make this expertise available to a wider audience.

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* G24 comprises the 12 Member States of the European Community, the 7 EFTA countries and Turkey, the USA, Canada, Japan, Australia and New Zealand.

156 The extent to which the European economy can interact and trade successfully with the other major developed market economies as in the U.S.A. and Japan is a matter which also has implications for higher education and advanced training. The arguments often adduced in relation to having a cadre of people trained in languages, cultures and economic structures of Member States in order to exploit the advantages of the Internal Market are also relevant to Europe's position in world markets. ***Unless Europe has people trained to represent her interests in these markets her prospects of trading successfully are considerably diminished no matter how good and competitive her products***. It goes without saying that the cultural/political aspects of these relationships are also of the utmost importance and have to be handled with skill and understanding.

157 There is a substantial overlap in cultural background between the U.S.A. and Europe. The differences are such, however, as to make the promotion of educational/cultural relationships highly desirable and for that reason the 1990 joint declaration by the Community and the U.S.A on cooperation in the field of higher education is to be welcomed. While arrangements for exchanges and other relationships exist between higher education institutions in most Member States and counterparts in the U.S.A it is important that these be further developed in a Community context. The open attitudes to study abroad in the universities in the U.S.A give their students advantages which ought also to be available to European students. Exchanges of staff, students and joint projects would be suitable areas for development in a Community context.

158 With Japan and the newly industrialised countries of the Pacific basin we are faced with the spectacle of very powerful, extremely rich economies whose cultures and structures are relatively little known in Europe. Japan, in particular, has considerable industrial investment in Europe and the flow of Japanese nationals into Europe for the purposes of business, tourism and the study of European languages, economies and cultures is appreciable. ***It is important for future economic and political relations with these countries that there should be a strong cadre of Europeans who are equipped to interact with them and to represent Europe's interests***. In order to bring this about it will be necessary to strengthen the studies concerning these countries in higher education institutions within the Community and to develop programmes involving cooperation, networks and exchanges with counterpart institutions in the countries concerned. While a number of higher education institutions in Europe have become involved, on their own initiative, in exchanges and other study arrangements with their Japanese counterparts and a certain level of activity is sustained through cultural agreements with individual Member States, these efforts could be strengthened within the framework of a Community-wide programme especially structured for this purpose.

159 The growing world-wide interest in the process of European integration - often seen as a model for possible regional integration elsewhere - which is giving rise to the development of European studies courses, should also be actively encouraged.

Information and Policy Analysis

160 The completion of the internal market and the enhanced opportunities for the free movement of people will give rise to new information needs on the part of individuals, institutions, companies, Member States and the Community itself.

161 For ***individuals*** to be mobile it is necessary that they be fully aware of study opportunities, job opportunities, acceptance of qualifications and living and working conditions in any part of the Community to which they would propose to migrate.

162 For ***higher education institutions*** it is important that they know where within the Community they can seek partnerships which can supplement and complement their work in education and research and that they are conscious of the areas of education and training that offer good employment and career prospects both at home and in other Member States. For the institutions, too, an awareness of what is happening in other countries is an important catalyst in the process of innovation and information on changing skills needs is a logical basis for curricular reform.

163 ***Companies*** operating within a European market will need to be aware of the significance of qualifications awarded in different Member States, of the supply of qualified professionals across the Community and of the extent to which their needs for highly skilled manpower are, or are not, being met.

164 ***Member States*** will need to take account of Community dimensions in the planning of their higher education and advanced training provision, particularly those relating to curricula and the effects of mobility at both student and graduate level. A wider and more comparable information system supports comparative analysis and helps in determining the direction of future developments.

165 For ***the Community*** it is necessary that it should have at its disposal information of a kind which would support citizens in the exercise of their rights under the Treaty. It is important also that it should have a reference framework as to what is happening throughout the Community in order to inform its policies and programmes. In particular, it must be able to take account of any weakness in exploiting the Internal Market, or in maintaining Europe's competitiveness in world markets arising from shortages of trained and qualified personnel. Information concerning human resources, their development and mobility is also necessary to ensure the proper functioning of regional and structural policies. The collection, structuring and analysis of information about higher education and advanced training is in itself a cohesive process which could promote the establishment of much needed points of connection between the different systems throughout the Community. ***The linking of higher education information to labour market information on a Community wide scale would signify a most important development.***

166 ***The Commission intends, therefore, to carry out a full examination of its information needs in the area of higher education and advanced training in order to develop an information system which will more fully inform its policies and programmes as well as those of all the actors capable of taking initiatives in the field of higher education.*** It will develop this system in consultation with the responsible authorities in the Member States and the Statistical Office of the European Communities. It will have regard to the proposal to set up an Employment Observatory and Documentation Centre (COM (89) 568 final). The Commission's examination will include a review of the operation of Eurydice and of the NARICs. This intention is fully in keeping with that announced with respect to vocational training in the proposal for a Community Action Programme "Towards Trans-European Networks" (COM (90) 585 final).

167 The information collected would be such as to allow for the development of ***valid comparisons in the analysis of higher education and advanced training systems within the Community and also allow for comparisons to be made on a wider international scale.*** It would include information on qualifications, on the output and employment of graduates and on the manner and extent to which higher education institutions are servicing continuing education needs. Information on the mobility of students for full course and partial studies and on the mobility of graduates for postgraduate training and for employment would be

collected. Labour Market information on skills shortages, employment opportunities and on the changing profiles of graduate employment would also be assembled, including RTD requirements.

168 Some of this information is already collected, but is not regularly analysed. Much more of it is already available in the Member States and in the higher education institutions. The task, however, would be more extensive than one of assembly as it would be necessary to work in cooperation with existing national networks and agencies which would, for their part, have to take account of the Community dimension and of Community requirements. The work would also have to be carried out in close consort with labour and employment agencies. It will also be necessary for the Commission to develop a capacity to analyse and disseminate this information.

169 An improved information base and capacity for analysis would enable the Commission to strengthen its interaction with Member States at a policy level and be more effective in bringing about a sharing of ideas about developments in the field of higher education and advanced training throughout the Community. ***Inherent in this process would be a regular system of reporting on changes which are planned, or are taking place in the Member States, such as is already available in the case of vocational training through the situation reports***. The reports on higher education and advanced training would provide a platform for discussion between the Commission and the authorities of the Member States on the extent to which Member State and regional policies are taking Community needs and considerations arising from Community membership into account.

Dialogue with the Higher Education Sector

170 This memorandum is designed to serve as a basis for discussion in the Member States, particularly in the universities and in the higher education institutions themselves, but also among all actors and interests concerned about the future direction and development of higher education within the European community.

171 The benefits of the discussion generated by this memorandum will be reflected in many instances in actions taken, or policies adopted, at Member State and institutional level. The European benefits of this discussion can only be fully realised if the Commission is in a position to assimilate and analyse the feedback, indentify areas of consensus regarding cooperation and coordination and translate this consensus into policies to be encouraged and promoted in the Member States and into programmes and joint actions to be pursued at Community level. Moreover the pace of change in Europe and in higher education itself is such that many new issues and concerns are bound to arise with increasing rapidity, some even as a result of action stimulated by this memorandum, and these will have to be addressed on an ongoing basis, particularly in respect of their European Community dimensions.

172 This extensive and developing agenda for discussion and examination would argue for ***a wider advisory support for the Commission in the field of higher education and advanced training*** than that which exists at present and which is largely confined to the operation of particular programmes. Such a support should reflect in its composition the increasing diversity of higher education and advanced training and its interface with economic life and serve as a counterpart to and be able to interact with programme committees and with RTD committees on matters of common concern especially as far as the Human Capital and Mobility Programme is concerned. It would also argue for ***a more specific interaction between the Commission and the Member States in this regard***.

173 Over the last year the Commission has reinforced its dialogue with the Liaison Committee of

Rectors' Conferences of the Member States of the European Communities with which it has had a long-standing relationship. The establishment in 1989 of the European Association of Institutions in Higher Education (EURASHE) representing national associations of institutions from the non-university sector enlarged this dialogue. The efforts of both these organisations to cooperate together led to the founding in March 1991 of the Committee for Higher Education in the European Community (CHEEC). Discussions on a regular basis with this body and with organisations representing teachers and students in higher education, will enable the principal actors in higher education to be more clearly heard on European Community issues.

174 The foregoing processes are seen as crucial to equipping the Commission for the wider role it will have to play in the coming decades to foster and sustain the European dimension in higher education and advanced training.

APPENDIX 1

LIST OF EC PROGRAMMES IN EDUCATION AND TRAINING AND ACRONYMS USED IN THIS DOCUMENT

ACP	African, Caribbean and Pacific countries
COMETT	Programme on cooperation between universities and enterprises regarding training in the field of technology - Community Action Programme in Education and Training for Technology - which backs up transnational partnerships and cooperation between higher education institutions and industry in promoting advanced training for technological change
DELTA	Commmunity action in the field of learning technologies - Development of European learning through technological advance - exploratory action
ERASMUS	European Community Action Scheme for the Mobility of University Students
EUROTECNET	Action programme to promote innovation in the field of vocational training resulting from technological change in the European Community, which is directed at exploring the impact of technological change on vocational qualifications and training systems and in identifying new skill needs in the workforce;
FORCE	Community action programme for the development of continuing vocational training - which is concerned with the development of continuing education and training in firms.
ICP	Inter-university Cooperation Programme
IRDAC	Industrial Research and Development Advisory Committee of the Commission of the European Communities
LINGUA	Programme to promote training in foreign languages in the European Community
R&D	Research and Development
RTD	Research and Technological Development
SME	Small and Medium Sized Enterprise
SPRINT	Strategic Programme for Innovation and Technology Transfer
TEMPUS	Trans-European Mobility Scheme for University Studies
UETP	University Enterprise Training Partnership
VLSI	Very Large Scale Integrated Systems

APPENDIX 2

TABLES

YOUNG PEOPLE (20 to 24) IN THE COUNTRIES OF THE EUROPEAN COMMUNITY (1988 = 100)

	1980	1988	1995	2000	2010	2020
B	101.7	100	85	77	74	65
DK	88.2	100	88	78	69	75
D	85.5	100	62	56	63	53
GR	91.3	100	92	93	-	-
E	89.5	100	99	93	75	80
F	98.3	100	98	85	86	83
IRL	98.0	100	92	95	82	74
I	83.3	100	91	76	58	58
L	99.3	100	81	77	81	76
NL	93.8	100	89	74	77	82
P	95.6	100	102	95	-	-
UK	85.7	100	83	73	82	86
CE	89.2	100	86	76	72	72
Source : EUROSTAT						

YOUNG PEOPLE (15 to 19) IN THE COUNTRIES OF THE EUROPEAN COMMUNITY (1988 = 100)

	1980	1988	1995	2000	2010	2020
B	113.9	100	87	86	80	69
DK	105.8	100	89	74	86	79
D	122.6	100	71	74	78	56
GR	98.9	100	97	89	-	-
E	96.5	100	94	76	80	77
F	99.6	100	86	90	85	80
IRL	95.4	100	96	89	72	65
I	99.8	100	81	67	63	57
L	117.0	100	87	91	92	79
NL	103.7	100	76	75	83	78
P	104.3	100	95	86	-	-
UK	106.5	100	80	85	96	87
CE	105.1	100	83	79	80	72
Source : EUROSTAT						